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# Why Common Law Tort Recovery is Inadequate to Compensate Victims of Toxic Exposure

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Table of Contents

# I. Introduction

Over the past three decades, the government of the United States has reacted to increased public concern over the environment by enacting an abundance of environmental legislation.[1] The federal government, which once took the position that pollution was a state and local concern, has now firmly taken the lead in addressing environmental problems. To accomplish the mandates of environmental laws, the Environmental Protection Agency, and other federal agencies, have promulgated regulations, rules, and guidance documents on a massive scale.[2] These laws and regulations, which control virtually every aspect of toxic substances in exquisite detail, can be overwhelming both in

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[1] There is no precise definition of an "environmental" law. For a comprehensive list of federal laws that "have a significant affect on the environment" see Kevin Madonna, Note and Comment, *Federal Environmental Statutes*, 13 PACE ENVTL L. REV. 1171 (1996) (listing, in alphabetical order, hundreds of federal environmental laws). For a more succinct listing, along with summaries, of what the Environmental Protection Agency views as the major environmental laws, see Environmental Protection Agency, *Major Environmental Laws* (last modified March 13, 1997) <http://www.epa.gov/region5/defs/index.html> (available through the EPA's homepage at <http://www.epa.gov>). Included are the Clean Air Act, 42 U.S.C. §§ 7401-7671q (1994 & Supp I 1995), the Clean Water Act, 33 U.S.C. §§ 1251-1387 (1994 & Supp. I 1995), the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601-9675 (1994 & Supp. I 1995), the Emergency Planning and Community Right to Know Act, 42 U.S.C. §§ 11011-11050 (1994 & Supp. I 1995), the Endangered Species Act, 16 U.S.C. §§ 1531-1544 (1994 & Supp. I 1995), the Federal Insecticide, Fungicide and Rodenticide Act, 7 U.S.C. §§ 136-136y (1994), the National Environmental Policy Act, 42 U.S.C. §§ 4321-4370d (1994 & Supp. I 1995), the Occupational Safety and Health Act, 29 U.S.C. §§ 651-678, (1994 & Supp. I 1995), the Pollution Prevention Act, 42 U.S.C. §§ 13101-13109 (1994), the Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901-6992k (1994 & Supp. I 1995), the Safe Drinking Water Act, 42 U.S.C. §§ 300f-300j (1994 & Supp. I 1995), and the Toxic Substances Control Act, 15 U.S.C. §§ 2601-2692 (1994 & Supp. I 1995). As used in this paper, the term environmental law refers to legislation with a declared purpose that involves environmental protection. (*See, e.g.*, Clean Air Act § 101(b), 42 U.S.C. § 7401(b), which declares as one of the purposes of the act "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population.")

[2] The sheer volume of regulations promulgated under the major environmental laws is staggering. The 1990 Clean Air Act Amendments alone called for the promulgation of over 175 regulations, over 30 guidance documents, twenty-two reports and fifty-three research projects. The Clean Air Act regulation dealing with new source performance standards at 40 C.F.R. 60, is nearly 1,000 pages. *See* INSIDE EPA'S CLEAN AIR REPORT, Dec. 10, 1990, at 1. The cost of this regulatory effort is also enormous. *See* Paul Portney, *Chain-Saw Surgery: The Killer Clauses Inside the "Contract,"* WASH. POST, Jan. 15, 1995 at

volume and complexity.[3] Yet, despite the increasingly comprehensive nature of environmental laws and their regulations, these laws make no provision for compensation of persons injured by toxic or hazardous substances that are released into the environment by polluters.[4]

More often than not, when a person suffers personal injury as a result of exposure to a toxic substance, that person has no alternative but to bring a common law action in tort to recover damages.[5] Such actions are based on state law, and are thus subject to the various nuances that result from each state's interpretation of the common law of torts. Causes of action that exist in one state may not even exist in another. In addition, procedural barriers may exist in one state that do not exist in another.[6] Depending on the circumstances, the legal barriers to tort recovery can be so great, that recovery is

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C03 *available in* 1995 WL 2073463 (reporting that compliance with environmental regulations costs more than $140 billion a year according to the Environmental Protection Agency).

[3] A good example of this baffling complexity is found in the regulations at 40 C.F.R. §§ 260 and 261, where the terms "solid waste" and "hazardous waste" are defined for the purposes of the Resource Conservation and Recovery Act. In *United States v. White*, 766 F. Supp. 873, 880 (E.D. Wash. 1991), the court recognized that these regulations are in fact "dense, turgid, and a bit circuitous." The court in *G.J. Leasing Co., v. Union Electric Co.*, 54 F.3d 379, 385 ( 7th Cir. 1995) referred to the legal framework established by the Comprehensive Environmental Response, Compensation and Liability Act as "Superfund Cloudcuckooland."

[4] The injuries referred to here are physical injuries. Some environmental laws do provide for recovery for property damage, and at least one provides for recovery for some personal, economic damages. *See, e.g.*, the Oil Pollution Act of 1990, Pub. L. 101-380, 104 Stat. 484 (codified as amended at 33 U.S.C. §§ 2701-2761 (1994 & Supp. I 1995)).

[5] Injured persons must resort to common law tort claims in the absence of a federal or state law that establishes either a cause of action for their injury, such as the Federal Employers' Liability Act, 45 U.S.C. §§ 51-60 (1994 & Supp. I 1995) (providing a common carrier by railroad is liable to any person for injuries suffered while employed by the carrier, due to the negligence of the carrier); or, a compensation scheme, such as the Federal Employees Compensation Act, 5 U.S.C. §§ 8101-8193 (1994) (providing for compensation of federal employees injured while in the performance of their duties). Generally, such laws are aimed at a narrow class of individuals, or, as in the case of the National Childhood Vaccine Injury Act, 42 U.S.C. §§ 300aa-10 to 300aa-33 (1994 & Supp. I 1995), are aimed at a specific type of injury. For a discussion of alternative compensation schemes in general, *see infra* section VII.

[6] *See infra* notes 119-122 and accompanying text.

extremely difficult, if not impossible.[7] Where recovery in tort cannot be obtained, injured persons may be left without a remedy.

This paper will examine the common law tort system in an environmental context. After describing the scope of the "toxic exposure" problem and analyzing the relationship between tort law and environmental law, it will address the many reasons why tort recovery is an inadequate means of compensating persons who have been injured by toxic exposure. Although the common law has evolved, in many respects, to adapt to the challenges presented by environmental torts, significant shortcomings still exist. Next, various existing federal compensation schemes will be described. Finally, the Oil Pollution Act of 1990[8] will be examined. With this law Congress has taken a tentative first step toward establishing a federal cause of action and compensation scheme for persons injured by toxic exposure.

## II. The Scope of the Problem

### A. Creating A Toxic Legacy

Until relatively recently, pollution of the environment was seen as necessary part of industrialization and progress in the United States. The late nineteenth-century attitude of American law toward pollution is captured in the case of *Pennsylvania Coal Company v.*

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[7] A number of these legal barriers were first identified in cases involving exposure to radiation. *See* Gerald Hutton, *Evidentiary Problems in Proving Radiation Injury*, 46 GEO. L.J. 52 (1957).

[8] Pub. L. 101-380, 104 Stat. 484 (codified as amended at 33 U.S.C. §§ 2701-2761 (1994 & Supp. I 1995)).

*Sanderson*,[9] where a stream that flowed through the plaintiff's property was rendered contaminated and useless by coal mining operations three miles upstream. In that case the court stated; "To develop the great natural resources of a country, trifling inconveniences to particular persons must sometimes give way to the necessities of a great community.[10] This protective attitude toward industry continued well into the twentieth century.[11] However, by the 1960s, it had become evident that unrestrained industrial development and waste disposal practices were causing more than "trifling inconveniences."

The disastrous effect of unrestrained industrialization and resource exploitation is apparent when one considers the enormity of the hazardous waste problem it has created. There are currently tens of thousands of hazardous waste sites in the United States.[12] One way to conceptualize the scope of the problem is in terms of how much money it will cost to clean up the hazardous waste sites we know about. In 1980, the Comprehensive Environmental Response, Compensation and Liability Act[13] initially established the "Superfund" – a trust fund of $1.6 billion to deal with the most serious hazardous waste sites that were known of at the time.[14] This initial appropriation underestimated both the

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[9] 149 A. 453 (Pa. 1886).

[10] *Id.* at 459.

[11] *See, e.g.*, Boomer v. Atlantic Cement Company 55 Misc. 2d 1023, 287 N.Y.S.2d 112 (1967), *aff'd*, 30 A.D.2d 480, 294 N.Y.S.2d 452 (1968), *rev'd and remanded*, 26 N.Y.2d 219, 309 N.Y.S.2d 312, 257 N.E.2d 870 (1970) (trial judge found the defendant's emission of dust and raw materials from its cement plant created a nuisance, but refused to grant an injunction because of the defendant's immense investment in the local economy).

[12] There are an estimated 61,000 such sites on federal land. Gary Lee, *Chit Is In for U.S. Dumping; Panel's Guidelines Show 5 Agencies Bear the Brunt of Responsibility*, WASH. POST, October 18, 1995, at A17.

[13] Pub. L. No. 96-510. 94 Stat. 2767 (codified as amended at 42 U.S.C. §§ 9601-9675 (1994 & Supp. I 1995)).

[14] 42 U.S.C. § 9611(a). The trust fund was established to pay for clean ups where responsible parties could not be located or no longer existed.

size and the cost of the needed environmental cleanup.[15] From 1980 to 1985, projections of the average cost of a Superfund site cleanup rose from $2.5 million to $8.3 million.[16] More recent estimates place the average cost of cleaning up the roughly 1,200 Superfund sites at $27 million each.[17]

Estimates of the total cost of all hazardous waste site cleanups are in the $85 billion to $100 billion range, although some estimates are as high as $1 trillion.[18] Estimates of the total cost continue to rise in part because we are constantly finding new sites where hazardous waste was improperly disposed of.[19] Improper waste disposal in the past is in large part responsible for the creation of a burgeoning environmental industry that in 1995, employed 1.3 million workers and generated $180 billion in revenues.[20]

In spite of the problems we already face, industry continues to manufacture substances with toxic potential. Currently, nearly 69,000 different chemicals may be legally produced in the United States.[21] Many of these chemicals are produced in

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[15] SENATE COMM. ON ENV'T AND PUB. WORKS, SUPERFUND IMPROVEMENT ACT OF 1985, REPORT TO ACCOMPANY S. 51, TOGETHER WITH ADDITIONAL AND MINORITY VIEWS, S. REP. NO. 11, 99TH CONG., 1ST SESS. 2 (1985).

[16] *Id.*

[17] Tony Burlando et al., *The Environmental Dilemma: Who Shall Pay for Superfund?* 39 RISK MANAGEMENT 20 (1992).

[18] *Id.*

[19] CONGRESSIONAL BUDGET OFFICE, CLEANING UP DEFENSE INSTALLATIONS: ISSUES AND OPTIONS 5, 1995 (noting the high degree of uncertainty that characterizes the Department of Defense's environmental cleanup efforts results from the continuous discovery of more polluted sites, and new contaminants at existing sites).

[20] U.S. DEP'T OF COMMERCE, STATISTICAL ABSTRACT OF THE UNITED STATES 225 (1996).

[21] *See* ENVIRONMENTAL PROTECTION AGENCY, TOXIC SUBSTANCES CONTROL ACT: A GUIDE FOR CHEMICAL IMPORTERS/EXPORTERS (1991). Before a chemical substance may be manufactured or imported into the United States, it must be listed on the Chemical Substance Inventory established by § 8(b) of the Toxic Substances Control Act, 15 U.S.C. § 2607(b) (1994). No printed version of the Chemical Substance Inventory is current and accurate since the inventory is constantly being updated. Furthermore, the inventory does not identify all chemical substances currently in U.S. commerce because some substances are specifically excluded from the definition of chemical substances by statute or rule.

enormous quantities[22] by an industry that is immensely important to the U.S. economy.[23] Inevitably, some of these substances escape into the environment.[24] In 1995, over 2.2 billion pounds of toxic chemicals were released into the environment.[25] This was the seventh straight year that releases declined since 1988, when nearly 5 billion pounds were released.[26] However, while toxic releases have declined steadily since 1988, toxic waste production has increased each year.[27] In 1992, an average year for toxic waste production, 37.3 billion pounds were generated.[28]

Agriculture in the United States is a major user of these chemicals, due to its heavy reliance on fertilizers and pesticides. Since 1980, fertilizer use in the U.S. has averaged 20

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[22] *See, e.g.*, Carl Meyer, *The Environmental Fate of Toxic Wastes, The Certainty of Harm, Toxic Torts, and Toxic Regulation*, 19 ENVTL. L. 321, 328 n. 29 (1988) (noting that in 1987, the U.S. chemical industry produced 202 billion pounds of organics, 365 billion pounds of inorganics, 2.2 million tons of synthetic rubber, 42 billion pounds of plastic resins, 23 million tons of fertilizer, 4.3 million tons of man-made fibers, and 1.1 billion gallons of paints and coatings). Ironically, many chemicals with toxic qualities are manufactured in order to treat other chemicals with toxic effects. *See e.g.*, *Water and Wastewater Treatment: A Thriving Business*, CHEMICAL ENGINEERING, December 1, 1989, *available in* 1989 WL 2142482.

[23] In 1994, the U.S. chemical industry had sales in excess of $84 billion. *Chemical Industry Finally Has a Good Year*, CHEMICAL AND ENGINEERING NEWS, June 26, 1995, *available in* 1995 WL 13904964.

[24] For example, between the production and eventual combustion of natural gas, up to 10% of its methane content escapes into the environment. *See* Richard Stewart & Jonathan Wiener, *The Comprehensive Approach to Global Climate Policy: Issues of Design and Practicality*, 9 ARIZ. J. INT'L & COMP. L. 83, 92 (1992). Once released into the environment, methane has a residency time in the atmosphere of approximately 11 years. *Id.* at 87.

[25] *EPCRA: 1995 TRI Data Show Increase While Total Emission Figures Decline*, BNA CHEMICAL REGULATION DAILY, May 21, 1997. Since 1988, the Emergency Planning and Community Right to Know Act (EPCRA), 42 U.S.C. §§ 11001-11050 (1994 & Supp. I 1995), has required owners and operators of certain industrial facilities to report releases of toxic chemicals into the environment when more than a threshold amount of a toxic chemical is present at the facility.

[26] *Generation of Toxic Waste Climbs, Despite Declining Releases: TRI*, HAZARDOUS WASTE NEWS, April 3, 1995. Reported releases are probably much lower that than actual releases for two reasons. First, since releases from facilities with less than the threshold amounts of chemicals present are not reported, there is no way to know the actual total of all toxic releases. Second, facilities that do report releases are not required to base their reports on actual measurements or monitoring. In the absence of available data, "reasonable estimates" may be used. *See* 42 U.S.C. 11023(g). Without a legal requirement for accuracy, it stands to reason that industry's estimates of its releases into the environment may be lower than actual.

[27] *EPCRA: 1995 TRI Data Show Increase While Total Emission Figures Decline*, *supra* note 25.

[28] Ken Miller, *Industries Dumped 3.1 Billion Pounds of Toxics in '92*, GANNET NEWS SERVICE, April 19, 1994.

million tons per year.[29] Currently, there are over 25,000 pesticides registered for use in the United States.[30] After dropping in the early 1990s, pesticide use has risen steadily since 1993.[31] In 1995, about 1.25 billion pounds were used by farmers and other growers, up 2% over 1994, and up over 100 million pounds from 1993.[32]

The application of most fertilizers and pesticides necessarily requires that they be released into the environment. Once released they become part of the hydrologic cycle, polluting rivers, streams and other bodies of water.[33] It is commonly recognized that agricultural runoff is a leading source of water pollution and is largely uncontrolled.[34] The use of pesticides in the United States is so prevalent that most of us carry measurable amounts of them in our adipose tissue.[35]

Intuitively, we know that exposure to toxic substances can cause death, disease and other injuries, whether the exposure results from the use of chemical substances or the improper disposal of those substances after they have been used. By 1976. it was believed that between sixty and ninety percent of all cancer cases in the United States were caused

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[29] Lester Brown & Christopher Flavin, *China's Challenge to the United States and to the Earth*, WORLD WATCH, Sept. 19, 1996 at 5, *available in* 1996 WL 12656286.

[30] *See* Doug Campt, *A Look at the Basics: Reducing Dietary Risk*, EPA JOURNAL, May/June 1990 at 19. The Federal Insecticide, Fungicide and Rodenticide Act, 7 U.S.C. §§ 136-136y (1994). makes it unlawful to distribute or sell any pesticide that has not been registered with the Environmental Protection Agency. Upon application, EPA must register a pesticide if, when used in accordance with widespread and commonly recognized practice, it will not cause unreasonable adverse effects on the environment.

[31] *EPA Data Show Use of Pesticides Rose to Record Level Last Year*, AIR/WATER POLLUTION REPORT'S ENVIRONMENT WEEK, June 7, 1996, *available in* 1996 WL 7981523.

[32] *Id.*

[33] *See generally*, COUNCIL ON ENVIRONMENTAL QUALITY, ENVIRONMENTAL TRENDS 21-51 (1989).

[34] *See, e.g.*, Drew Kershen, *From Point to Nonpoint and Beyond,* 9 NAT. RESOURCES & ENV'T 3 (1995). Under the Clean Water Act § 502(14), 33 U.S.C. § 1362(14) (1994), agricultural storm water discharges and return flows from irrigated agriculture are specifically excluded from the definition of point sources and are therefore not subject to the National Pollutant Discharge Elimination System (NPDES) established by Clean Water Act § 402, 42 U.S.C § 1342 (1994).

[35] *See* Environmental Defense Fund v. Environmental Protection Agency, 548 F2d 998. 1008 (D.C. Cir. 1976), *cert. denied*, 431 U.S. 925 (1977) (evidence presented that heptachlor epoxide and oxychlordane,

by environmental contaminants.[36] In 1980, the Surgeon General noted, "[T]oxic chemicals are adding to the disease burden in a significant, although as yet not precisely defined way. In addition, we believe that this problem will become more important in the years ahead."[37] Seven years after this report, the Environmental Protection Agency estimated that in the United States during 1987, thousands of deaths were caused by toxic contamination.[38] Recently, 60,000 deaths per year have been attributed to occupational and environmental exposures to chemicals of all types, and up to 60,000 deaths per year attributed to particulate air pollution.[39] Thus, just as we have seen a constant increase over the past twenty years in estimates concerning the monetary cost of cleaning up our hazardous waste problem,[40] we have also seen a continuous increase in the estimates concerning the health costs caused by toxic exposure.

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the principal metabolites of the pesticides heptachlor and chlordane, are present in over 90% of the U.S. population).

[36] S. REP NO. 698, 94th Cong. 2d Sess. 1, 4, *reprinted in* 1976 U.S.C.C.A.N. 4491, 4494.

[37] SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS, 96TH CONG., REPORT ON HEALTH EFFECTS OF TOXIC POLLUTION: A REPORT FROM THE SURGEON GENERAL 8 (Comm. Print 1980).

[38] In 1987, the Environmental Protection Agency estimated that 6000 deaths were caused by pesticides on foods, 1000 deaths were caused by indoor air pollutants, 2000 deaths were caused by exposure to chemicals in the environment and toxic air pollution, 1000 deaths were caused by inactive waste sites, between 400 and 1000 deaths were caused by drinking water contamination, and another 1000 deaths were caused by a combination of these factors. ENVIRONMENTAL PROTECTION AGENCY, UNFINISHED BUSINESS: A COMPARATIVE ASSESSMENT OF ENVIRONMENTAL PROBLEMS 28-31 (1987).

[39] COMMISSION ON RISK ASSESSMENT AND RISK MANAGEMENT, RISK ASSESSMENT AND RISK MANAGEMENT IN REGULATORY DECISION MAKING, VOLUME II AT 4. (1997).

[40] *See supra* notes 13-20 and accompanying text.

B. The Consequences of Toxic Exposure

Toxic substances, natural and man-made, are all around us.[41] In fact, all substances can be considered toxic since a substantial enough exposure to anything will produce a toxic effect.[42] Depending on toxicity, duration of exposure, the relative health of the person exposed, and whether the substance is retained or metabolized, substances can cause acute or chronic toxic effects.[43] Acute effects involve an immediate adverse biological reaction to an intense, high-level exposure. Chronic effects involve delayed adverse biological reactions after long-term, low-level exposures.[44]

Human exposure to toxic substances has increased in recent years partly because it is becoming more and more difficult for people to avoid exposure to toxic substances. A large part of the problem lies with our constantly increasing human population.[45] All living organisms create waste materials and humans are no exception. With an ever-increasing population comes an ever-increasing waste stream. In addition to a constantly increasing waste stream, we are continually creating new chemical substances, and finding

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[41] Michelle Mittlestadt, *Study Finds 44 Million Threatened by Chemical Accidents*, AP, Aug. 15, 1995, *available in* 1995 WL 4402052 (reporting allegations made by the National Environmental Law Center and the U.S. Public Interest Research Group, based on Toxic Release Inventory data). *Cf.* GREGG EASTERBROOK, A MOMENT ON EARTH 606 (1995) (The author criticizes environmental "sensationalism" in the media and cynically points out that since dozens of items in every home fall under the legal definition for toxic waste, newspaper headlines such as the one cited above might as well include the entire population of the United States.)

[42] It is the amount of the dose received that makes many substances toxic. For example, iron, zinc, cobalt, copper, manganese, chromium, selenium, even sunshine, are carcinogenic in large amounts, yet small amounts are essential for human life. *See generally* Meyer, *supra* note 22, at 327.

[43] *Id.* at 331.

[44] *Id.*

[45] NILES ELDRIDGE, DOMINION (1995). The author points out, "It is every generation's seemingly irresistible temptation to pronounce the world's imminent demise." *Id.* at 3. Nevertheless, he asserts that human population, currently nearing 6 billion, and projected to level off at around 14 billion in the middle of the next century, and the sidestream pollution it produces, is threatening another great wave of mass

new uses for existing substances.[46] Unfortunately, the toxic effects of the waste we have already created, and the substances we continue to create, are not fully understood.[47]

Our lack of understanding of these substances is complicated by our lack of understanding of the etiology of many diseases. For example, whether or not many substances actually cause cancer in humans remains unknown.[48] While a large percentage of the hundreds of thousands of cases of cancer that develop every year are believed to be caused by environmental factors,[49] many people develop cancer in the absence of toxic substances. Thus, the degree to which toxic exposure contributes to cancer is unclear. The most that can be agreed upon is that cancer and other diseases result, not from any single substance, but from a complex interplay of factors.[50]

Our knowledge of the toxic effects of substances and the degree to which they contribute to disease is limited because the means which we can use to obtain information concerning the causes of disease is limited. Obviously, it isn't ethically feasible to test toxic substances on humans. Tests on laboratory animals provide information that is of

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extinctions – similar to the other mass extinctions that have occurred regularly in the earth's history as documented in one of his earlier books. *See* NILES ELDRIDGE, THE MINER'S CANARY (1991).

[46] Toxic Substances Control Act § 5, 15 U.S.C. § 2604, requires notice to the Environmental Protection Agency before a new chemical substance may be manufactured, and before an existing chemical substance may be used in a manner that constitutes a significant new use. Since 1979, over 26,000 notices have been submitted to the EPA for review. *See* Lawrence E. Culleen, TSCA New Chemicals Program 1 (May 25, 1995) (unpublished outline accompanying an American Bar Association presentation) (on file with the author).

[47] The National Research Council reported in 1984 that toxicity data for over 80% of the 48,000 most commonly used chemical substances was unavailable. *See* NATIONAL RESEARCH COUNCIL, TOXICITY TESTING: STRATEGIES TO DETERMINE NEEDS AND PRIORITIES (1984).

[48] Edward Schwartzbauer & Sidney Shindell, *Cancer and the Adjudicative Process: The Interface of Environmental Protection and Toxic Tort Law*, 14 AM. J.L. & MED. 1 (1988) (pointing out that while the adverse health effects of a few substances, such as asbestos and tobacco, are clear, the evidence in many other cases is meager and indirect).

[49] R. WINTER, CANCER CAUSING AGENTS 1-2 (1979).

[50] David Rosenberg, *The Causal Connection in Mass Exposure Cases: A "Public Law" Vision of the Tort System,* 97 HARV. L. REV. 851, 856 (1984) (explaining that rarely is any toxic agent the exclusive source of a given disease).

questionable validity.[51] Epidemiological evidence, which uses statistical models that compare the rate of disease in an exposed population to the rate in an unexposed population, may be even more unreliable.[52] In the case of substances that migrate in groundwater[53] or have long-term chronic effects,[54] it may be dozens of years before epidemiological evidence establishes the toxic nature of those substances.

Unfortunately, common law tort recovery normally does little to contribute to our knowledge of the effects of toxic substances. In a tort case, the burden of proving the

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[51] Predicting how exposure to a particular substance will affect humans based on how the substance affects animals is hopelessly inexact. The primary problem with animal testing stems from the use of a "maximum tolerated dose" that is then interpreted using a "linear dose response." First, a test group of animals, usually rats or mice, is exposed to the maximum amount of the substance they can tolerate without dying from acute poisoning. Once an adverse effect is observed, a linear dose response model is used to extrapolate the data to predict how the substance will affect humans. For example, if six parts per million will cause cancer in 1 out of every 100 of the animals tested, it is assumed that six parts billion, (one one-thousandth of six parts per million) of that amount, will cause one additional cancer in every 100,000 people (one one-thousandth of 1 out of every 100). The problem with this approach is twofold. First, the maximum tolerated dose is often thousands or even millions of times greater than that to which humans are ever exposed. Second, one one-thousandth of any substance may have no toxic effect at all. *See*, Joel Brinkley, *Many Say Lab-Animal Tests Fail to Measure Human Risk,* N.Y. TIMES, Mar. 23, 1993, at A1 (quoting Dr. Robert Maronpot, Chief of the National Institute of Environmental Health Sciences' experimental-pathology laboratory as saying, "The problem is we don't know what the findings really mean.")

[52] Troyen Brennan, *Causal Chains and Statistical Links: The Role of Scientific Uncertainty in Hazardous Substance Litigation*, 73 CORNELL L. REV. 469, 506 (1988). "An epidemiological study, unlike an animal bioassay study, is not really an experiment. Researchers cannot control the factors that affect the quality of the data. Exact quantitative estimation of exposure levels is usually impossible, and so dose/response curves are extremely difficult to complete. Thus, epidemiology contains more uncertainty than short-term assays, and animal bioassay studies."

[53] "Almost half of the American population relies on groundwater for its drinking water supply. Further, almost one-fifth of America's population relies on groundwater from individual wells without the benefit of treatment systems. Inasmuch as these wells are rarely monitored, it is impossible to determine when human health is threatened by polluted water until after illness develops." STAFF OF THE SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS OF THE HOUSE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE, 96TH CONG., 1ST SESS., HAZARDOUS WASTE DISPOSAL REPORT TOGETHER WITH ADDITIONAL AND SEPARATE VIEWS 13 (Comm. Print 1979).

[54] Many toxic substances produce diseases with long latency periods. The latency period of a disease, *i.e.*, the time between initial exposure and the onset of the disease, varies according to the disease. Some examples of the average latency period involved with hazardous substances believed to cause cancer are: arsenic, 25 years; tar, 20-24 years; radiation 20-30 years; asbestos, 18 years. *See* Allen Slagel, *Medical Surveillance Damages: A Solution to the Inadequate Compensation of Toxic Tort Victims*, 63 IND. L.J. 849, 852 n. 15 (1988) (citing 5B LAWYER'S MEDICAL CYCLOPEDIA OF PERSONAL INJURIES AND ALLIED SPECIALTIES 38.46h (3d. ed. 1986)).

effect of a toxic substance falls on the plaintiff.[55] However, in many cases the plaintiff lacks the resources and the sophistication to gather and develop the evidence necessary to meet the burden.[56] Arguably, the defendant has a better understanding of the toxic effects of a substance, particularly if the defendant manufactures that substance, yet the defendant may not have a motive to make that information known.[57] In fact, a defendant who develops evidence concerning the toxic effect of a substance may have a strong motivation to conceal it.[58]

Thus, it is reasonable to conclude that our knowledge of the toxic effects of substances cannot keep pace with our increasing exposure to them. It is the unknown consequences of this exposure that causes us to fear many substances.[59] Some of these fears have turned out to be well-founded. In many cases, the connection between exposure to a particular substance and the incidence of a particular disease has been well established.[60] Naturally, once a connection is established between certain substances and certain diseases, it raises concerns about the unknown effects of other substances.

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[55] *See generally* RESTATEMENT (SECOND) OF TORTS § 433B (1965).

[56] *See, e.g.*, Elam v. Alcolac, Inc., 765 S.W.2d 42, 179 (Mo. Ct. App. 1988) (court noted that plaintiff's lack of proof concerning toxic emissions from defendant's chemical plant was a result of defendant's failure to install required monitoring devices).

[57] *Id.*

[58] PAUL BRODEUR, OUTRAGEOUS MISCONDUCT: THE ASBESTOS INDUSTRY ON TRIAL 97-130 (1985) (documenting the fact that as early as the 1930s, executives of Johns-Manville, a manufacturer of asbestos products, were aware of the adverse health effects of asbestos products and tried to conceal that evidence). Similar allegations have been made against the manufacturers of tobacco products. *See* Milo Geyelin, *Flight-Attendants Tobacco Trial Nears*, WALL ST. J., June 2, 1997, at B7 (suit by airline flight attendants alleging tobacco manufacturers committed fraud by concealing information that second-hand smoke causes heart and lung disease).

[59] Some believe we are in the grip of an unfounded "cancerphobia" related to the use of chemicals. *See* Schwartzbauer & Shindell, *supra* note 48, at 6.

[60] For example, angiosarcoma, a rare form of liver cancer, is associated primarily with exposure to vinyl chloride. Vinyl chloride is a base material for common plastic, used in thousands of products. In addition, the relationship between exposure to asbestos fibers and the lung cancer mesothelioma, is well established.

## III. The Federal Response

It was during the 1960s that the nation "discovered" the environment.[61] More accurately, the nation discovered that pollution control as it was then being practiced wasn't working.[62] At that time there was virtually no federal environmental law – only a smattering of laws that provided limited federal funding aimed at encouraging research, studies, and sharing of information concerning environmental matters.[63] Environmental protection was left to the states.[64] The little environmental protection that actually occurred resulted from state laws, local ordinances, and the occasional common law tort action that might be successful in obtaining an injunction.[65]

It was against this backdrop of ineffectual regulation that polluting activities flourished, threatening our environment. During the 1960s,

> Americans agonized over rivers catching fire, species becoming extinct, wildlife disappearing, oil spills, fish kills, detergents foaming in rivers and lakes, beach closings, and any number of horrors which led them to regard pollution as a menace gone out of control. When the astronauts returned from the moon with pictures showing North America covered with clouds of pollution, moreover, Americans felt ashamed as well as afraid. Titles of the books popular at the time reflect the ominous mood: Silent Spring, Vanishing Air, This Endangered Planet, The Closing Circle, The Darkening Land . . . .[66]

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[61] Arnold Reitze, *Overview and Critique: A Century of Air Pollution Control Law: What's Worked; What's Failed; What Might Work*, 21 ENVTL. L 1549, 1581 (1991).
[62] *Id.*
[63] *See, e.g.*, Clean Air Act of 1955, Pub. L. No. 84-159, 69 Stat. 322, which authorized $5 million annually to support research and provide assistance to the states.
[64] J. CLARENCE DAVIES, THE POLITICS OF POLLUTION 51 (1970).
[65] Reitze, *supra* note 61.
[66] Mark Sagoff, *The Principles of Federal Pollution Law*, 71 MINN. L. REV. 19, 26 (1986).

It was generally recognized that the law was not protecting the environment.[67] Due in part to parochial interests, the states were failing to control activities that had national importance. Thus, in addition to recognizing the need to protect the environment, it was also recognized that the federal government should take the lead.[68] During this time, the environmental "movement" took on an almost a religious fervor. Environmental laws viewed pollution as an evil that had to be stopped.[69]

The early 1970s saw a flurry of federal environmental laws.[70] These laws were aimed at industrial practices that were fouling our environment,[71] as well as waste disposal practices.[72] Recognizing the dangers to human health posed by past waste disposal

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[67] *Id.* at 23.
[68] *Id.*
[69] *Id.* at 46.
[70] On these dates the following public laws were enacted:
January 1, 1970 – National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852 (codified as amended at 42 U.S.C. §§ 4321-4370 (1994 & Supp. I 1995)).
December 31, 1970 – Clean Air Act Amendments of 1970, Pub. L. No. 91-604, 84 Stat. 1676, (codified as amended at 42 U.S.C. §§ 7401-7642 (1994 & Supp. I 1995)).
August 27, 1972 – Noise Control Act of 1972, Pub. L. No. 92-574, 86 Stat. 1234 (codified as amended at 42 U.S.C. §§ 4901-4918 (1994 & Supp. I 1995)).
October 18, 1972 – Federal Water Pollution Control Act (Clean Water Act), Pub. L. No. 92-500, 86 Stat. 816 (codified as amended at 33 U.S.C. §§ 1251-1376 (1994 & Supp. I 1995).
October 21, 1972 – Federal Insecticide, Fungicide, and Rodenticide Act, Pub. L. No. 92-516, 86 Stat. 973 (codified as amended at 7 U.S.C. §§ 136-136y (1994 & Supp. I 1995)).
December 16, 1974 – Safe Drinking Water Act, Pub. L. No. 93-523, 88 Stat. 1660 (codified as amended at 42 U.S.C. §§ 300F-300J-10 (1994 & Supp. I 1995)).
October 11, 1976 – Toxic Substances Control Act, Pub. L. No. 94-469, 90 Stat. 2003 (codified as amended at 15 U.S.C. §§ 2601-2629 (1994 & Supp. I 1995)).
October 21, 1976 – Solid Waste Disposal Act, Pub. L. No. 94-580, 90 Stat. 2795 (codified as amended at 42 U.S.C. §§ 6901-6987 (1994 & Supp. I 1995)).
August 7, 1977 – Clean Air Act Amendments of 1977, Pub. L. No. 95-95, 91 Stat. 685 (codified as amended at 42 U.S.C. §§ 7401-7642 (1994 & Supp. I 1995)).
[71] *See, e.g.*, Clean Air Act §101(a)(2), 42 U.S.C. 7401(a)(2) (1994), which states "the growth in the amount and complexity of air pollution brought about by urbanization, industrial development, and the increasing use of motor vehicles, has resulted in mounting dangers to public health and welfare. . . ."
[72] Solid Waste Disposal Act, Pub. L. No. 94-580, 90 Stat. 2795 (codified as amended at 42 U.S.C. §§ 6901-6992k (1994 & Supp. I 1995)).

practices, Congress went on to enact legislation aimed at cleaning up areas where hazardous wastes had been improperly disposed of .[73]

The federal environmental laws that were passed in the 1970s and 1980s[74] erected the legal infrastructure that still exists today. The first federal laws focused on air and water pollution, and sought to control exposure to toxic substances through those media with emissions standards set by federal agencies.[75] It was through controlling exposure to toxic substances that these laws sought to accomplish their primary purpose – the protection of public health and welfare.[76] However, as will be explained, these laws do not and can not completely eliminate the risks associated with toxic exposure

When it comes to exposure to a toxic substances, public health and welfare is often protected through federal agency regulations that are "technology based"[77] or "technology forcing."[78] With technology based standards, polluting discharges or emissions must be limited to levels that can be attained through available control technologies.[79] With technology forcing standards, an acceptable level of exposure is established by a federal

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[73] Comprehensive Environmental Response, Compensation, and Liability Act, Pub. L. No. 96-510, 94 Stat. 2767 (codified as amended at 42 U.S.C. §§ 9601-9675 (1994 & Supp. I 1995). CERCLA established a strict liability scheme designed to have parties who were responsible for toxic contamination pay the cost of cleaning up hazardous waste sites.

[74] *See supra* notes 70-73.

[75] Environmental laws are often described as "agency forcing" since they require federal agencies to set standards by promulgating regulations. *See* Robert V. Percival, *Symposium: Environmental Federalism: Historical Roots and Contemporary Models,* 54 MD. L. REV. 1141 (1995) (discussing how the major federal environmental laws that were enacted or substantially amended during the 1970s vested the Environmental Protection Agency and other federal agencies with enormous regulatory responsibility).

[76] *See, e.g.*, Clean Air Act § 108(a)(1)(A), 42 U.S.C. § 7408(a)(1)(A) (1994), which requires the Administrator of the Environmental Protection Agency to establish ambient air quality standards for air pollutants, "the emission of which . . . cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare."

[77] E.I. Du Pont de Nemours & Co. v. Train, 430 U.S. 112 (1977) (the Court describes the technology-based pollutant discharge standards required by the Clean Water Act).

[78] ARNOLD REITZE, AIR POLLUTION LAW 560-561 (1995) (the author describes the motor vehicle exhaust standards established by the Clean Air Act as performance oriented – emission standards are established and how the standards are met is left to the manufacturers).

agency, and it is left to industry to develop the means to ensure that exposure does not exceed those levels.[80] Determining an acceptable level of exposure is no easy task though, especially for carcinogenic substances. Since we don't know exactly what causes cancer, it isn't possible to establish a "safe" level of exposure for carcinogenic substances.[81] There is only one way to completely eliminate the risk from exposure to carcinogenic substances, and that is to eliminate exposure to the substance entirely. However, this is something most environmental laws are not designed to do.[82] Those laws that have tried to completely eliminate exposure to certain toxic substances have failed.[83]

Rather than completely eliminate the risks from toxic exposure, federal environmental laws strike a balance between the risks associated with exposure to toxic substances with the economic benefits derived from those substances.[84] The

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[79] *See* E.I. Du Pont De Nemours & Co. v. Train, 430 U.S. 112 (1977).

[80] *See* Reitze, *supra* note 78.

[81] Carcinogenic substances are said to have "nonthreshold" effects. What this means is there is no established threshold of exposure below which we can be certain that the substance will not cause cancer. *See* COMMISSION ON RISK ASSESSMENT AND RISK MANAGEMENT, RISK ASSESSMENT AND RISK MANAGEMENT IN REGULATORY DECISION MAKING, VOLUME II AT 101. (1997).

[82] For example, the Toxic Substances Control Act, 15 U.S.C. §§ 2601-2692 (1994 & Supp. I 1995) generally provides for regulation of chemical substances that may present an unreasonable risk of injury to health or the environment. When the EPA attempted to ban the use of asbestos in almost all products, the 5th Circuit Court of Appeals, in the case of *Corrosion Proof Fittings v. Environmental Protection Agency*, 947 F.2d 1201, 1215 (5th Cir. 1991) remanded their regulations finding, "Congress did not enact the Toxic Substances Control Act as a zero-risk statute." This case followed the Supreme Court's ruling concerning the Occupational Safety and Health Act in the case of *Industrial Union Department v. American Petroleum Institute*, 448 U.S. 607 (1980). There, the Court noted that ensuring with absolute certainty that every single worker was protected from all risk from exposure to carcinogens would require a zero-exposure limit. It held that while the Occupational Health and Safety Act of 1970 provided for a safe workplace, safe is not the equivalent of risk free. *Id.* at 642.

[83] This is because completely eliminating the risks caused by toxic exposure would require a zero emissions policy that would effectively dislocate the U.S. economy. *See* Troyen Brennan, *Environmental Torts*, 46 VAND. L. REV. 1, 28-36 (1993), for a description of how EPA implemented (or rather, failed to implement) the toxic pollutant provisions contained in Clean Water Act § 307, 33 U.S.C. § 1317 (1994), and the hazardous air pollutant provision of Clean Air Act § 112, 42 U.S.C. § 7412 (1994), two environmental laws in which Congress seemed to call for completely eliminating health risks associated with exposure to certain toxic substances.

[84] For example, the Federal Insecticide Fungicide and Rodenticide Act generally provides that regulatory action concerning a pesticide is to be taken when its use may cause "unreasonable adverse effects on the environment." This is defined at § 2 (bb)(1), 7 U.S.C. § 136 (bb)(1), as "any unreasonable risk to man or

Environmental Protection Agency and other federal agencies have developed a process of risk assessment and risk management to help them determine when regulatory action is needed.[85] The process expresses risk in terms of the number of additional deaths caused by exposure to a given substance.[86] Regulatory action is taken where a level of exposure produces more than a certain number of deaths in a given population.[87] Where the level of exposure produces fewer than a certain number of cancer deaths, no action is taken.[88]

The problem with this "protection of the public as a whole" approach is that it does not protect individuals. Exposures that are determined to be "acceptable" are based on statistics that accept a certain number of additional cancer cases, or other illnesses, as a result of that level of exposure.[89] Just as we accept that a given number of people may die on the highways as a result of the increased risk of raising the speed limit from 55 miles per hour to 70 miles per hour, our environmental laws accept that a certain number of people may suffer injuries or death from toxic exposure set at "acceptable" levels.

Even though federal environmental laws tacitly recognize that people will be injured by toxic exposure, these laws make no provision to compensate those who are

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the environment, taking into account the economic, social and environmental costs and benefits of the use of any pesticide."

[85] *See generally* COMMISSION ON RISK ASSESSMENT AND RISK MANAGEMENT, RISK ASSESSMENT AND RISK MANAGEMENT IN REGULATORY DECISION MAKING (1997).

[86] There is a background rate of approximately 240,000 cancer deaths out of the 1 million people that die every year in the United States. *See id.*, Volume II at 63.

[87] *Id.* Generally, regulatory action under environmental laws is not taken to limit exposure to a toxic substance unless the exposure will produce at least one extra cancer death per million persons over a seventy-year lifetime. However, in some circumstances, much more dangerous levels of exposure are allowed. For example, risk criteria in regulating occupational exposure to specific chemicals often corresponds to one extra cancer death out of every 1,000 workers exposed over a working lifetime.

[88] *Id.*

[89] *See, e.g.*, 54 Fed. Reg. 38044 (1989) where EPA established by rule its approach to establishing the National Emissions Standards for Hazardous Air Pollutants (NESHAPS). The standards are based on a maximum individual risk of no higher than approximately 1 in 10,000 that a person living near a plant would have of contracting cancer if he or she were exposed to the maximum pollutant concentrations for

injured. Instead injured persons must resort to common law tort claims. The decision to leave toxic injury compensation to the common law tort system was not made without considerable debate.[90] In fact, numerous attempts have been made at including provisions in environmental laws that would establish a federal a cause of action for personal injury from toxic exposure. Those attempts have consistently failed. For example, in 1979, three bills were introduced in the House of Representatives that would have created a federal cause of action against negligent waste generators.[91] A 1980 Senate proposal would have provided for joint and several liability of waste generators, transporters, and disposers under a strict liability standard.[92] In the same way the "Superfund"[93] established a federal fund to clean up hazardous waste sites, the Senate proposal would have established a fund to compensate toxic tort victims.

Instead of enacting a federal cause of action for personal injury when it passed the Comprehensive Environmental Response, Compensation and Liability Act in 1980, Congress created a study group to investigate the adequacy of existing common law and

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seventy years. Stated another way, this standard accepts that among a population of 10,000 people, there will be 1 additional case of cancer caused by toxic exposure over the same period of time.

[90] *See, e.g.*, 126 CONG. REC. S14,973 & S14,974 (daily ed. Nov. 24, 1980) (statement of Sen. Mitchell describing the absence of a personal injury provision in the then proposed Comprehensive Environmental Response, Compensation, and Liability Act). "Under this bill, if a toxic waste discharge injures both a tree and a person, the tree's owner, if it is a government, can promptly recover from the fund for the cost of repairing the damage, but the person cannot. In effect, at least as to the superfund, it's all right to kill people, but not trees . . . . Under the bill before us, the State may be fully reimbursed from the fund for the cost of restoring new trees to its park. But what about the little girl? We have given her no recourse from the fund. She cannot recover the money it will take to give her proper medical care . . . . It is simply a failure of will on the part of the Congress to deal with what is the most serious part of the problem – injuries to persons."

[91] H.R. 1049, 96th Cong., 1st Sess. §§ 101-106 (1979); H.R. 3797, 96th Cong., 1st Sess. §§ 3211-3215 (1979); H.R. 5291, 96th Cong., 1st Sess. §§ 211-215 (1979).

[92] S. 1480, 96th Cong., 2d Sess. § 4(a) (1980).

[93] Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§ 9601-9675 (1994 & Supp. I 1995). CERCLA established a scheme of strict liability for the costs associated with cleaning up hazardous waste sites and created a fund that relies on tax revenues and appropriations to pay the costs of cleanups when responsible parties could not be located. *See* 42 U.S.C. § 9611.

statutory remedies for victims of toxic waste pollution.[94] The study identified a number of shortcomings of existing remedies, most of which are discussed in this paper, and recommended that Congress create an administrative compensation scheme to compensate victims of toxic contamination.[95]

Congress had the opportunity to enact such a compensation scheme in 1986, when it enacted the Superfund Amendments and Reauthorization Act.[96] Again, Congress declined to do so. Although Congress did create the Agency for Toxic Substance and Disease Registry,[97] it stopped short of creating a federal law to deal with personal injury compensation. At one point, an amendment was introduced that would have provided a federal cause of action for personal injury as a result of hazardous waste, but it was defeated.[98]

Instead of a federal cause of action for personal injury, each of the major environmental statutes contains a citizens' suit provision.[99] While the primary purpose of these provisions is to provide individuals with standing so they may sue for enforcement of federal regulations, the citizens' suit provisions also expressly preserve the rights of individuals seek relief under the common law. The language preserving these common

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[94] 42 U.S.C. § 9561(e).

[95] *See* SUPERFUND 301(E) STUDY GROUP, INJURIES AND DAMAGES FROM HAZARDOUS WASTES - ANALYSIS AND IMPROVEMENT OF LEGAL REMEDIES: A REPORT TO CONGRESS IN COMPLIANCE WITH SECTION 301 (E) OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION , AND LIABILITY ACT OF 1980 (1982).

[96] Pub. L. No. 99-499, 100 Stat. 1613 (1986) (codified as amended in scattered sections of 42 U.S.C. §§ 9601-9675 (1994 & Supp. I 1995)).

[97] 42 U.S.C. § 9604(i) (1994). The ATSDR performs health assessments and conducts toxicity studies of hazardous wastes and disposal sites.

[98] H.R. 3852, 99th Cong., 1st Sess., (1985). 131 CONG. REC. H11,574 (1985). The amendment was defeated in the House of Representatives by a vote of 162 to 261. *Id.* at H11,585-86.

[99] Typical examples are found at 42 U.S.C. § 7604 (Clean Air Act); 33 U.S.C. § 1365 (Clean Water Act); 42 U.S.C. § 6972 (Resource Conservation and Recovery Act); 42 U.S.C. § 9659 (Comprehensive Environmental Compensation, Liability and Response Act); 15 U.S.C. § 2619 (Toxic Substances Control Act); 33 U.S.C. § 1415(g) (Marine Protection, Research, Sanctuaries Act); 42 U.S.C. § 300j-8 (Safe Drinking Water Act).

law rights is basically the same in all the statutes: "Nothing in this section shall restrict any right which any person (or class of persons) may have under statute or common law to seek enforcement of any emission standard or limitation or to seek any other relief . . . ."[100]

Thus, while the 1970s and 1980s produced an avalanche of environmental laws, the citizens' suit provisions in these laws represent the extent of the federal response to the problem of personal injury from toxic exposure. Rather than provide any substantive right, they merely refer individuals to other rights that may exist, either by statute or common law, to receive compensation for toxic exposure. Since most states have chosen not to establish statutory causes of action for individuals who are injured by toxic exposure,[101] these individuals must rely on state common law tort remedies.

## IV. Tort Law in an Environmental Context

### A. Tort Law in General

A tort is a civil wrong, other than a breach of contract, for which the court will provide a remedy in the form of an action for damages.[102] The essential elements of every tort include (1) existence of a legal duty (2) breach of that duty, and (3) damage as a

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[100] 42 U.S.C. § 7604(e).
[101] California is a state that has enacted both a cause of action and compensation scheme for persons injured by toxic exposure. *See* CAL. HEALTH & SAFETY CODE §§ 25,300-25,395 (West 1995).
[102] W. PAGE KEETON ET AL., PROSSER AND KEETON ON THE LAW OF TORTS 2 (5th ed. 1984).

proximate result.[103] Tort law is primarily concerned with private wrongs between individuals.[104] An act that constitutes a tort need not be a crime, although a criminal act can constitute a tort.[105] The remedy that is awarded the aggrieved party is most often money damages,[106] though other equitable relief is sometimes available.[107]

Tort law has traditionally performed a number of beneficial functions. Those functions include:

* To compensate for harm, or to prevent the continuance or repetition of harm.
* To restore to a person what another has unjustly obtained at his expense.
* To punish for wrongs and to deter from wrongdoing.
* To decide the rights of parties.
* To decide or alter a person's status.[108]

Other commentators have attempted to distill the purposes of the tort system down to two functions: compensating the injuries of the victim and deterring the conduct of the person inflicting the injury.[109] In other words, the law of torts is concerned with the allocation of losses arising out of human activities.[110]

Regardless of how its purpose is characterized, tort law has traditionally served both a private and public function. The private purpose involves restoring the injured

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[103] Put another way, the essential elements are a legal right, breach of a legal duty, and damage. STUART M. SPEISER ET AL., THE AMERICAN LAW OF TORTS 32-44 (1983).
[104] *See* 21 AM. JUR. 2D *Criminal Law* § 2 (1981). "The same wrongful act may constitute both a crime and a tort. But the crime is held to constitute an offense against the public pursued by the sovereign, whereas the tort is a private injury to be pursued by the injured party."
[105] *Id.*
[106] *See* RESTATEMENT (SECOND) OF TORTS § 902 (1977).
[107] *See generally* RESTATEMENT (SECOND) OF TORTS § 822 cmt. b (1977) (discussing the availability of injunctive relief in a private nuisance action).
[108] WILLIAMS & HEPPLE, FOUNDATION OF THE LAW OF TORT 23-26 (1976).
[109] KEETON ET AL., *supra* note 102, at 6 & 25-26.
[110] *Id.* at 6.

party, as nearly as possible, to the position the person held before the injury.[111] The public function consists of the deterrent effect that a judgment may have on others who might engage in the same injurious conduct.[112]

Tort law is, for the most part, a function of common law.[113] It relies heavily on precedent, but is not meant to be static – it is meant to develop and change.[114] However, since it deals only with specific cases and relies on precedent, change does not come uniformly, but only in fragmented, haphazard increments.[115] Because of its nature, tort law should be thought of as adjudicative rather than regulatory.[116] It operates "ex post" opposed to "ex ante."[117] It is not meant to apply prospectively, but only with regard to the facts presented by a particular case.[118]

Tort law varies both substantively and procedurally from state to state.[119] Statutes of limitations and available defenses may vary.[120] Causes of action that exist in one state may not exist in another.[121] Thus, in sharp contrast to the uniform national standards that have emerged to regulate toxic substances and other practices that may

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[111] *Id.*
[112] *Id.*
[113] *Id.* at 19.
[114] Consolidated Rail Corp. v. Gottshall, 512 U.S. 532, 558 (1994) (Souter, J., concurring) (noting the Court had a duty to develop a federal common law of negligence under Federal Employers' Liability Act, "informed by reference to the evolving common law.").
[115] Mary Lyndon, *Tort Law and Technology*, 12 YALE J. ON REG. 137, 165 (1995) (noting that tort law's "piecemeal and inconsistent adjudications dilute the effectiveness of tort standards as deterrents.").
[116] *Id.*
[117] *Id.*
[118] *See, e.g.*, Mendes v. Medtronic, Inc., 18 F.3d 13, 19 (1st Cir. 1994) (court's holding that state common law tort claim was preempted by Food, Drug and Cosmetic Act was "limited to the facts and claims" of the case).
[119] "In the context of our federal system, each state is permitted to determine its own approach to tort issues." Georgene M. Vairo, *Multi-Tort Cases: Cause for More Darkness on the Subject, or a New Role for Federal Common Law,* 54 FORDHAM L. REV. 167, 172 (1985).
[120] *Id.*
[121] For example, a state may or may not recognize a cause of action for emotional distress in the absence of a physical injury. *See infra* section VI. E.

harm the environment. there are a myriad of different standards that affect the ability of a toxic tort victim to recover for his injuries.[122]

The characteristics of tort law have caused many to question its ability to adapt to the challenges posed by toxic torts.[123] As one court put it, "The simple fact is that rules developed against the relatively unsophisticated backdrops of barroom brawls, intersection collisions and slips and falls lose some of their relevance in these days of miracle drugs with their wondrous, unintended, unanticipated and frequently long delayed side effects."[124]

1) Tort Law's Role in Environmental Protection

As has already been mentioned, tort law was historically one of the primary means of controlling the undesirable effects of pollution.[125] Prior to the existence of the major federal environmental laws, state laws, local ordinances and common law tort actions were the only legal approaches used to control pollution.[126] Using tort law, a nuisance action could be brought against a polluter.[127] Money damages could be obtained for harm caused by a past nuisance, and an injunction could be obtained to stop the pollution from a

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[122] Jack B. Weinstein & Eileen Hershenov, *The Effect of Equity on Mass Tort Law*, 1991 U. ILL. L. REV. 269, 270 (1991) (explaining how state and federal courts are "left to their own devices" in dealing with toxic tort litigation).
[123] *Id.*
[124] Martinez-Ferrer v. Richardson-Merrill, Inc., 105 Cal. App. 3d 316, 324, 164 Cal. Rptr. 591, 595 (1980) (case involving cataracts allegedly caused by anti-cholesterol drug).
[125] Reitze, *supra* note 61. at 1554-1569.
[126] *Id.*
[127] Bliss v. Washoe Copper Co., 186 F. 789 (9th Cir. 1911).

continuing nuisance.[128] However, like state laws and local ordinances, the tort system was never very effective at controlling toxic contamination.[129]

Despite this, some view tort law as supplementing regulatory law in accomplishing the goal of environmental protection.[130] However, this view tends to ignore the fact that the massive federal legislative effort aimed at environmental protection came about because the tort system and local regulation were almost completely ineffectual at controlling polluting activities.[131] Recognizing this, others have argued that case by case adjudication of environmental issues can provide no meaningful, consistent regulation since those issues are being decided by "tens of thousands of different juries."[132]

Granted, tort law would provide a meaningful supplement to regulatory law if it provided an economic disincentive to those who engage in polluting activities.[133] However, tort law can do so only if tort victims are reasonably certain to prevail on their claims. As will be seen, the legal barriers that victims of toxic exposure encounter in pursuing tort claims make recovery unlikely.[134] Thus, tort law cannot be expected to provide a meaningful supplement to regulatory law when it comes to environmental protection.[135]

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[128] *Id.*
[129] Reitze, *supra* note 61, at 1554-1569 (detailing the failure of the tort system to provide any meaningful environmental protection).
[130] Lyndon, *supra* note 115.
[131] Reitze, *supra* note 61.
[132] STEPHEN BREYER, BREAKING THE VICIOUS CIRCLE: TOWARD EFFECTIVE RISK REGULATION 59 (1993).
[133] Lyndon, *supra* note 115, at 143.
[134] *See infra* section VI.
[135] W. Kip Viscusi, *Toward a Diminished Role for Tort Liability: Social Insurance, Government Regulation, and Contemporary Risks to Health and Safety*, 6 YALE J. ON REG. 65, 105-106 (1989).

2) What are Toxic Torts?

Toxic torts involve personal injuries that result from toxic substances that are released into the environment.[136] The substances that cause injury may be actual products such as pesticides,[137] or the byproducts or wastes of industrial processes.[138] The terms "toxic tort" and "environmental tort" are essentially synonymous.

Toxic torts are unique in that they often have features that distinguish them from other types of torts. Toxic torts involve (1) injuries that stem from exposure to harmful substances; (2) they often involve exposure of large numbers of people, and; (3) they involve injuries that may not manifest themselves immediately but instead have long periods of latency.[139] It is these distinguishing features that create challenges to an injured party seeking recovery. Before addressing these challenges, it is useful to review the theories of tort recovery that have been successfully used in toxic tort cases.

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[136] Typical cases involve exposure to toxic substances through groundwater contamination as in Anderson v. Cryovac, Inc., 862 F.2d 910 (1st Cir. 1988), Backes v. The Valspar Corp., 783 F.2d 77 (7th Cir. 1986), Renaud v. Martin Marietta Corp., 749 F. Supp. 1545 (D. Colo. 1990), *aff'd* 972 F.2d 304 (10th Cir. 1992), Werlein v. United States, 746 F. Supp. 887 (D. Minn. 1990) *vacated* 793 F. Supp. 989 (D. Minn. 1992), *In re* Paoli R.R. Yard PCB Litig., 916 F.2d 829 (3rd Cir. 1990), and Merry v. Westinghouse Elec. Corp., 684 F. Supp. 847 (M.D. Pa. 1988); exposure through the air as in Elam v. Alcolac, Inc., 765 S.W.2d 42 (Mo. Ct. App. 1988), Maddy v. Vulcan Materials Co., 737 F. Supp. 1528 (D. Kan. 1990), and Wells v. United States, 655 F. Supp. 715 (D.D.C. 1987), *aff'd* 851 F.2d 1471 (D.C. Cir. 1988); and exposure to pesticides as in Villari v. Terminix Int'l, Inc., 692 F. Supp. 568 (E.D. Pa. 1988), and Sterling v. Velsicol Chemical Corp., 647 F. Supp. 303 (W.D. Tenn 1986), *aff'd in part, rev'd in part on other grounds*, 855 F.2d 1188 (6th Cir. 1988).

[137] Schuver v. E.I. Du Pont de Nemours & Co., 546 N.W.2d 610 (Iowa 1996), *cert. denied*, 117 S.Ct. 274 (1996).

[138] *In re* Paoli R.R. Yard PCB Litig., 916 F.2d 829 (3rd Cir. 1990).

[139] *See* Bill Wells, *The Grin Without the Cat: Claims for Damages from Toxic Exposure Without Present Injury*, 18 WM. & MARY J. ENVTL L. 285, 288 (1994). Wells lists as characteristics of toxic torts other features such as the use of novel scientific evidence, the unpredictability of outcome, and the presence of administrative problems and insurance disputes. Granted, these characteristics are present in many toxic tort situations, however, they are also present in other tort actions. Thus, they are not necessarily distinguishing features.

## V. Tort Recovery in Toxic Tort Cases

### A. Theories of Recovery

#### 1) Theories Involving Property Interests

A variety of legal theories have been used successfully in toxic tort cases. These theories had their genesis in the protection of real property rights.[140] The earliest cases in the United States involving toxic harm utilized the theory of private nuisance.[141] Generally, a nuisance is the unreasonable interference with another's use and enjoyment of his land.[142] The early cases involved such things as oil seepage from refining operations[143] and smoke from a smokestack.[144] Money damages can be awarded for harm caused by a past nuisance,[145] and an injunction may be obtained to prevent further harm.[146]

Private nuisance is still widely used as a theory of recovery in toxic tort cases. In *Ayers v. Township of Jackson*,[147] three hundred and thirty-nine residents of Jackson

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[140] *See* Allison Hayward, *Common Law Remedies and the UST Regulations*, 21 B.C. ENVTL. AFF. L. REV. 619 (1994).

[141] *Id.* at 620 (noting twenty-one pre-1900 cases where plaintiffs pled private nuisance and sought damages or an injunction for injuries caused by pollution).

[142] RESTATEMENT (SECOND) OF TORTS § 822 (1977) provides:

> One is subject to liability for a private nuisance if, but only if, his conduct is a legal cause of an invasion of another's interest in the private use and enjoyment of land, and the invasion is either
>
> (a) intentional and unreasonable, or
>
> (b) unintentional and otherwise actionable under the rules controlling liability for negligent or reckless conduct, or for abnormally dangerous conditions or activities.

[143] Gavigan v. Atlantic Ref. Co., 40 A. 834 (Pa. 1898); Hauck v. Tide Water Pipeline Co., 26 A. 644 (Pa. 1898).

[144] Sullivan v. Royer, 13 P. 656 (Ca. 1887).

[145] Bliss v. Washoe Copper Co., 186 F. 789 (9th Cir. 1911).

[146] *See generally* RESTATEMENT (SECOND) OF TORTS § 822 cmt. b (1977) (discussing the availability of injunctive relief in a private nuisance action).

[147] 525 A.2d 287 (N.J. 1987).

Township, New Jersey, brought suit against the township when toxic pollutants leached from the county's landfill and contaminated the residents' well water. The court found the operation of the landfill constituted a nuisance. Similarly, in *Village of Wilsonville v. SCA Services, Inc.*,[148] the court found defendant's operation of a chemical waste disposal site constituted a nuisance. In *Ayers*, money damages were awarded, while in *Wilsonville* the plaintiffs obtained an injunction that forced the defendant to cease operations at the site.

The plaintiffs in those cases might have also prevailed on a theory of trespass,[149] another cause of action that toxic tort victims have used successfully. Early toxic tort trespass cases involved coal deposits in a stream[150] and distillery wastes.[151] More recently, trespass has been used where lead particulates and sulfur oxide deposits emitted from a smelting operation contaminated plaintiff's agricultural land.[152]

One of the most attractive theories of recovery from the perspective of the injured party is the theory of strict liability. The concept of imposing liability without fault had its origin in the absolute liability of landowners for ultrahazardous activities.[153] Activities that

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[148] 426 N.E.2d 824 (Ill. 1981)

[149] RESTATEMENT (SECOND) OF TORTS § 158 (1965) reads as follows:

> One is subject to liability to another for trespass, irrespective of whether he thereby causes harm to any legally protected interest of the other, if he intentionally
> (a) enters land in the possession of the other, or causes a thing or a third person to do so, or
> (b) remains on the land, or
> (c) fails to remove from the land a thing which he is under a duty to remove.

Furthermore, RESTATEMENT (SECOND) OF TORTS § 159 (1965) clearly envisions trespass occurring through the air or under the ground:

> (1) Except as stated in Subsection (2), a trespass may be committed on, beneath, or above the surface of the earth.
> (2) Flight by aircraft in the air space above the land of another is a trespass if, but only if,
> (a) it enters into the immediate reaches of the air space next to the land, and
> (b) it interferes substantially with the other's use and enjoyment of his land.

[150] Keppel v. Lehigh Coal & Navigation Co., 50 A. 302 (Pa. 1901).

[151] Hileman v. Hileman Distilling Co., 33 A. 575 (Pa. 1896).

[152] Borland v. Sanders, 369 So.2d 523 (Ala. 1979).

[153] Rylands v. Fletcher, L.R. 3 H.L. 330 (1868). Defendants reservoir burst and the court imposed liability without requiring proof of negligence. The court stated, "[T]he person who for his own purposes brings

were once referred to as ultrahazardous are today referred to as abnormally dangerous.[154] Regardless, it is the same concept and it is still viable in toxic tort cases. In the case of *Sterling v. Velsicol*,[155] the court held the defendant's act of maintaining a chemical waste burial site where 300,000 55-gallon drums of waste were buried constituted an abnormally dangerous activity that would justify the imposition of strict liability.

2) Theories Involving Toxic Products

Strict liability as a theory of recovery may also be applied in the context of exposure to products with toxic characteristics. In such cases, strict liability under a products liability theory is used.[156] As in strict liability for an abnormally dangerous activity, strict products liability imposes liability without fault.[157] One of the first major toxic tort cases where this theory was applied was the case of *Borel v. Fibreboard Paper*

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on his lands and collects and keeps there anything likely to do mischief if it escapes, must keep it in at his peril, and if he does not do so, is prima facie answerable for all the damage which is the natural consequence of its escape." *Id.* at 339.

[154] RESTATEMENT (SECOND) OF TORTS § 519 (1977) states:

> (1) One who carries on an abnormally dangerous activity is subject to liability for harm to the person, or chattels of another resulting from the activity, although he has exercised the utmost care to prevent the harm.
>
> (2) This strict liability is limited to the kind of harm, the possibility of which makes the activity abnormally dangerous.

[155] 647 F. Supp. 303 (W.D. Tenn. 1986), *aff'd in part, rev'd in part on other grounds*, 855 F.2d 1188, (6th Cir. 1988). *See also* State Dep't of Envtl. Protection v. Ventron Corp., 468 A.2d 150 (N.J. 1983) (holding landowner strictly liable for harm caused by toxic wastes stored on his property when it flowed onto the property of others).

[156] *See generally*, John Wade, *Strict Tort Liability for Products: Past, Present and Future*, 13 CAP. U. L. REV. 335 (1984).

[157] RESTATEMENT (SECOND) OF TORTS § 402A (1965) provides:

> One who sells any product in a defective condition unreasonably dangerous to the user or consumer or to his property is subject to liability for physical harm thereby caused to the ultimate user or consumer, or to his property, if
>
> (a) the seller is engaged in the business of selling such a product, and
>
> (b) is expected to and does reach the user or consumer without substantial change in the condition in which it is sold.

*Products Corporation.*[158] The plaintiff was an insulation worker who developed asbestosis and mesothelioma. He alleged that the asbestos insulation manufactured by several companies was defective in that it failed to warn him of the adverse health effects of asbestos fibers, and the court agreed. *Borel* was something of a milestone in toxic tort litigation. Prior to this case, courts had refused to extend the law of products liability to injuries that were perceived as "occupational" in nature.[159]

Whenever a toxic product is involved, another theory with potential application is breach of warranty. Breaches of warranty can be express or implied.[160] Closely related to breach of warranty is a claim based on misrepresentation. If certain conditions are met misrepresentation can result in strict liability.[161] The theories of express warranty and misrepresentation were advanced in the case of *Cipollone v. Liggett Group Inc.*[162] In that

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[158] 493 F.2d 1076 (5th Cir. 1973).

[159] *See* Bassham v. Owens-Corning Fiber Glass Corp., 327 F. Supp. 1007 (D.C.N.M. 1971). Much of the development of toxic tort law has taken place in the context of asbestos litigation, since asbestos materials were used ubiquitously throughout this century and the causal relationship between asbestos and various illnesses is now well-established.

[160] Under the Uniform Commercial Code, a seller of a product makes an express warranty by any affirmation of fact, description of the goods, or sample or model that becomes part of the basis of bargain between the seller and the buyer. U.C.C. §2-313(1)(a) through (c). An implied warranty of merchantibility (that the goods are fit for the ordinary purpose for which such goods are sold) accompanies the sale of any goods where the seller is a merchant with respect to that type of goods. U.C.C. §2-314(1).

[161] RESTATEMENT (SECOND) OF TORTS § 402B (1965) reads as follows:

> One engaged in the business of selling chattels who, by advertising, labels, or otherwise, makes to the public a misrepresentation of a material fact concerning the character or quality of a chattel sold by him is subject to liability for physical harm to a consumer of the chattel caused by justifiable reliance upon the misrepresentation, even though
>
> (a) it is not made fraudulently or negligently, and
>
> (b) the consumer has not bought the chattel from or entered into any contractual relation with the seller.

[162] 893 F.2d 541 (3rd Cir. 1990).

case, the plaintiff prevailed on the express warranty claim, resulting in the first jury verdict against a tobacco manufacturer.[163]

### 3) Negligence and Battery

In addition to the above theories, a plaintiff in a toxic tort case will often advance the theory of negligence.[164] In order to prove negligence, one must prove that the defendant was under a duty to conform to a standard of conduct, that the defendant breached the standard, that there was a reasonably close connection between the conduct and the resulting injury, and that an actual loss was suffered.[165] The duty breached by the defendant may be based on common law or statute.[166] In toxic tort cases, the duty the defendant breaches may involve the disposal of toxic waste,[167] or it may involve a product with toxic characteristics.[168]

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[163] Plaintiff's decedent, who died of lung cancer, testified before she died that she relied on numerous advertisements for defendant's cigarettes that stated the cigarettes were safe. The plaintiff asserted the advertisements constituted a warranty. *Id.* at 548-551.

[164] *See* Wilson v. Key Tronic Corp., 701 P.2d 518 (Wash. 1985) (Plaintiffs alleged nuisance, trespass and negligence in case involving groundwater contamination from a landfill).

[165] KEETON ET AL., *supra* note 102, at 164-165.

[166] *See* Sheila Bush, *Can You Get There From Here? Noncompliance with Environmental Regulation as Negligence Per Se in Tort Cases*, 25 IDAHO L. REV. 469 (1988-1989).

[167] Wilson v. Key Tronic Corp., 701 P.2d 518 (Wash. 1985).

[168] Negligence in toxic product cases usually involves a negligent failure to warn of some dangerous aspect of the product. Failure to warn of a foreseeable danger can also support a finding of strict liability since the failure to warn of foreseeable dangers may make a product defective and unreasonably dangerous. *See* Davis v. E. I. DuPont de Nemours Co., 729 F. Supp. 652 (E.D. Ark. 1989) and Borel v. Fiberboard Paper Prods., 493 F.2d 1076 (5th Cir. 1973). In Borel, the court noted the similar legal standard for finding negligence in failing to warn and strict liability. *Id* at 1093, 1094.

One final theory of recovery that should be mentioned is battery.[169] Although it is not often used as a theory in toxic tort cases, the legal elements required to establish a *prima facie* case would seem to exist in many toxic tort situations.[170] Since battery is an intentional tort, the primary difficulty with using this theory in a toxic tort case involves proving the defendant intended the toxic exposure suffered by the plaintiff. However, it may be possible to overcome this hurdle using the theory of "substantial certainty."[171] If so, battery is a viable theory and may even have an advantage over the traditional "nuisance/trespass" approach of toxic tort causes of action, since a battery action does not require a property interest.[172] The potentially far-reaching applications of this tort may even extend to exposure to secondhand tobacco smoke.[173]

B. Limitations in Toxic Tort Cases

When these theories are applied in toxic tort actions, a number of inherent weaknesses are exposed. For example, nuisance and trespass, the two theories most often

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[169] *See e.g.*, Werlein v. United States, 746 F. Supp. 887 (D. Minn. 1990) (plaintiff sued in battery for exposure to toxic waste); Barth v. Firestone Tire and Rubber Co., 661 F. Supp. 193 (N.D. Cal. 1987) (plaintiff sued in battery for exposure to industrial toxins).

[170] RESTATEMENT (SECOND) OF TORTS § 13 (1965) provides:

> An actor is subject to liability to another for battery if
>
> (a) he acts intending to cause a harmful or offensive contact with the person of the other or a third person, or an imminent apprehension of such a contact, and
>
> (b) a harmful contact with the person of the other directly or indirectly results.

[171] RESTATEMENT (SECOND) OF TORTS § 8A (1965) states, "The word "intent" is used throughout the Restatement of this Subject to denote that the actor desires to cause consequences of his act, or that he believes that the consequences are substantially certain to result from it." Thus, in the case of *Werlein v. United States*, 746 F. Supp. 887, 907 (D. Minn. 1990), the court held that a jury could find a defendant intended to cause an offensive contact when he dumped highly toxic substances onto sandy ground above an aquifer, if the jury found the dumping was substantially certain to cause an offensive contact between the toxic substances and the area's residents.

[172] *See supra* note 170.

used in toxic tort cases, require a property interest, for it is the invasion of property interests the tort is designed to protect.[174] Furthermore, private nuisance actions may conflict with and be preempted by public nuisance actions.[175] It has been held that where a defendant's act interferes with a right common to the general public, that interference constitutes a public nuisance and any injury sustained by an individual is "merged in the common nuisance and injury to all citizens, and the right is to be vindicated . . . through suit by a public official."[176]

A plaintiff can overcome this preemption by proving a special or peculiar damage or injury that is not common to the public.[177] Physical injury is normally considered a special injury.[178] However, having shown a special injury, the plaintiff's recovery is limited to damages based on the special injury.[179]

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[173] *See* David B. Ezra, *Smoker Battery: An Antidote to Second-Hand Smoke*, 63 S. CAL. L. REV. 1061 (1990).

[174] *See supra* notes 142 & 149.

[175] RESTATEMENT (SECOND) OF TORTS § 821B (1977) states:

> A public nuisance is an unreasonable interference with a right common to the general public. Circumstances that may sustain a holding that an interference with a public right is unreasonable include the following:
>
> (a) Whether the conduct involves a significant interference with the public health, the public safety, the public peace, the public comfort or the public convenience, or
> (b) whether the conduct is proscribed by a statute, ordinance or administrative regulation, or
> (c) whether the conduct is of a continuing nature or has produced a permanent or long-lasting effect, and, as the actor knows or has reason to know, has a significant effect upon the public right.

[176] Warner v. Mayor of Taunton, 148 N.E. 377, 378 (1925). *See also* United States v. Solvents Recovery Serv. of New England, 496 F. Supp. 1127 (D. Conn 1980).

[177] RESTATEMENT (SECOND) OF TORTS § 821C (1977) provides: "In order to recover damages in an individual action for a public nuisance, one must have suffered harm of a kind different from that suffered by other members of the public exercising the right common to the general public that was the subject of interference."

[178] RESTATEMENT (SECOND) OF TORTS § 821C (1977), cmt. d states, "When the public nuisance causes personal injury to the plaintiff or physical harm to his land or chattels, the harm is normally different in kind from that suffered by other members of the public and the tort action may be maintained."

[179] Anderson v. W. R. Grace & Co., 628 F. Supp.1219, 1234 (D. Mass. 1986). In this case, plaintiffs were prevented from seeking injunctive relief concerning defendant's groundwater polluting activities since the requested relief would not mitigate their special injuries, but would only remedy the public nuisance of groundwater contamination.

Secondly, since nuisance involves the unreasonable interference with the private use of property,[180] courts must balance the relative interests of the parties. Obviously, courts may be less willing to find an activity that causes toxic contamination is a nuisance if it has broad social utility.[181]

A significant problem in using trespass as a theory of recovery in a toxic tort case is that it is considered an intentional tort.[182] Proving that a defendant intended a toxic exposure, or that exposure was substantially certain to follow from the defendant's conduct, may be difficult. Moreover, courts often require the trespassory invasion be by something more tangible than toxic emissions.[183] They may also require actual harm, something the common law traditionally did not require in a trespass action.[184] In *Bradley v. American Smelting and Refining Company*,[185] a case involving alleged trespass by toxic emissions originating from a smelter, the Supreme Court of Washington broke with centuries of law concerning trespass and held that actual and substantial damages were required to maintain an action for trespass.[186]

The theory of strict liability is also limited in its application in toxic tort actions. Generally, the theory is available only in cases concerning "products" or abnormally

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[180] *See* RESTATEMENT (SECOND) OF TORTS § 822 (1977) *supra* note 142.

[181] *See, e.g.*, George v. Standard Slag Co., 431 S.W.2d 711 (Ky. 1968) where the court instructed the jury:

> In determining whether such annoyance (if any) is unreasonable you shall take into consideration all of the circumstances of the case as shown by the evidence, including the lawful nature and location of the defendant company's slag plant; the manner of its operation; its importance and influence on the growth and prosperity of the community; the kind, volume and duration of such atmospheric pollution (if any); the respective situations of the parties; and the character and development of the neighborhood and locality in which their properties are situated, including but not confined to existing zoning laws and regulations applicable to them. *Id.* at 715.

[182] *See* RESTATEMENT (SECOND) OF TORTS § 158 (1965) *supra* note 149.

[183] Maddy v. Vulcan Materials Co., 737 F. Supp. 1528 (D. Kan. 1990) (chemicals falling on neighboring farm did not constitute trespass).

[184] *See* RESTATEMENT (SECOND) OF TORTS § 158 (1965) *supra* note 149.

[185] 709 P.2d 782 (Wash. 1985).

[186] *Id.* at 790.

dangerous activities.[187] Many toxic tort cases involve neither.[188] For one thing, most toxic emissions are waste, not products.[189] Secondly, whether or not an activity is abnormally dangerous is a question of law,[190] and courts are circumspect in making such findings.[191] Where strict liability is inapplicable to a particular case, victims may have to rely on a theory of negligence to support their claims for damages.

Prevailing on a negligence claim requires proof that the defendant's conduct was unreasonable in light of the risk of harm to the plaintiff.[192] This involves proving the harm the plaintiff ultimately suffers was foreseeable at the time the defendant committed the alleged negligent act, since it the foreseeablity of harm that makes the defendant's conduct unreasonable.[193] The problem a toxic tort victim often faces involves the length time between the defendant's act and the resulting injury. It may be years after the defendant's act that a toxic exposure occurs, and many years after that that before the plaintiff's injury

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[187] *See supra* notes 154 & 157.

[188] *See, e.g.*, Elam v. Alcolac, Inc., 765 S.W.2d 42 (Mo. Ct. App. 1988).

[189] *Id.*

[190] *See, e.g.*, G.J. Leasing Co. v. Union Elec. Co., 825 F. Supp. 1363, 1373 (S.D. Ill. 1993) (stating "the determination of whether an activity is an abnormally dangerous activity is a question of law for the court").

[191] Courts are not always willing to find that an industry should be subject to strict liability merely because it produces, uses, or emits toxic substances. *See* Indiana Harbor Belt R.R. Co. v. American Cyanamid Co., 916 F.2d 1174 (7th Cir. 1992) (transportation of acrylonitrile by railroad does not constitute abnormally dangerous activity); Erbrich Prods. Co. v. Wills, 509 N.E.2d 850 (Ind. Ct. App. 1987) (production of liquid chlorine bleach that resulted in release of chlorine gas not abnormally dangerous activity). The attitude of many courts toward subjecting industry to strict liability under the theory of abnormally dangerous activity is captured in *Fritz v. E.I. Du Pont de Nemours & Co.*, 75 A.2d 256, 261 (Del. Super. Ct. 1950):

> To say that any corporation or individual possessing or using dangerous substances upon its or his premises should be held liable as an insurer in the event of injury to others by reason of the mere possession, use, or escape thereof would be but to strangle corporate and individual enterprise in many well recognized fields of endeavor.

[192] *See* RESTATEMENT (SECOND) OF TORTS § 291 (1965).

[193] *See* RESTATEMENT (SECOND) OF TORTS § 289 (1965).

manifests itself.[194] Despite the fact that injury may occur many years after the defendant's act, it is that act, and the foreseeability of risk of harm at the time of the act, that is relevant. The conduct which causes the exposure which in turn results in injury may very well be reasonable in light of what was foreseeable at that time.[195]

Obviously, a plaintiff's recovery under any of the above theories can reduced or even eliminated based on his own culpable conduct.[196] The defenses of contributory negligence, comparative negligence or assumption of the risk can be used in toxic tort cases, just as in any other tort case.[197] Since these defenses are equally applicable in any other type of tort case, they will not be discussed. However, a number of other legal barriers do apply specifically in toxic tort cases, and these barriers will now be addressed.

## VI. Barriers to Recovery in Toxic Tort Cases

### A. Federal Preemption

Federal preemption of state law has its roots in the Supremacy Clause of the U.S. Constitution.[198] Even though the powers of the federal government are supposedly "few

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[194] The first delay may be caused by the pathway of exposure. For example toxic contamination may take many years to migrate in groundwater. The second delay may result from the latency period of the toxic injury.

[195] *See* Western Greenhouses v. United States, 878 F. Supp. 917 (N.D. Tex. 1995) (court held that toxic waste disposal methods used from 1940 to 1970, and which ultimately contaminated groundwater, were not unreasonable because defendant could not foresee these activities could cause injury).

[196] *See generally* Borel v Fiberboard Paper Prods. Corp., 493 F.2d 1076, 1096 (1973) (defendant raised the defenses of contributory negligence and assumption of the risk in case involving asbestos products).

[197] *Id.*

[198] "This Constitution and the laws of the United States which shall be made in pursuance thereof . . . shall be the Supreme law of the Land; and the Judges in every State shall be bound thereby, anything in the Constitution or laws of any state to the contrary notwithstanding." U.S. CONST. art. VI, cl. 2.

and defined,"[199] when Congress chooses to regulate an activity pursuant to its Constitutional authority, such as interstate commerce,[200] it may expressly or impliedly preempt state law. Express preemption occurs when Congress clearly expresses its intent to preempt state law.[201] Implied preemption occurs when application of state law would conflict with federal law. Such conflict arises when it is "impossible to comply with both . . . or where the state law stands as an obstacle to the accomplishment of the full purposes and objectives of Congress.[202]

Persons injured by toxic exposure must rely on state common law causes of action, and the major federal environmental laws specifically state that they are not to be construed so as to limit the common law remedies that may be available under state law.[203] Yet, issues of federal preemption of state law regularly arise in toxic tort litigation. When preemption occurs, it can significantly limit the ability of a tort victim to recover.

For example, the federal government has mandated particular labeling and warning requirements for many potentially toxic products.[204] Those who are injured by those products must often rely on the theories of product liability or negligence.[205] Claims in such cases may allege that the product was defective and unreasonably dangerous, or the manufacturer was negligent because there was either no warning of the dangers associated

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[199] THE FEDERALIST NO. 45, (James Madison).
[200] Wickard v. Filburn, 317 U.S. 111 (1942); United States v. Lopez, 514 U.S. 549 (1995).
[201] Pacific Gas & Elec. Co. v. State Energy Resources Conserv. & Dev. Comm'n, 461 U.S. 190, 203 (1983).
[202] Silkwood v. Kerr-McGee Corp., 464 U.S. 238, 248 (1984).
[203] *See supra* notes 99 & 100 and accompanying text.
[204] Such requirements are found within the Hazardous Substances Labeling Act, 15 U.S.C. §§ 1261-1278 (1994 & Supp. I 1995) and the Federal Insecticide, Fungicide and Rodenticide Act, 7 U.S.C. §§ 136-136y (1994).
[205] *See, e.g.*, Moss v. Parks, 985 F.2d 736 (4th Cir. 1993).

with the product, or the warnings that were present were inadequate.[206] However, issues concerning product labeling are not a question state law may decide if the federal government controls the label and its warning.[207]

The conflict between federal labeling requirements and state common law causes of action in toxic tort cases can be traced to the Federal Hazardous Substances Labeling Act[208] which was enacted in 1960. The purpose of the law was to "provide nationally uniform requirements for adequate cautionary labeling of packages of hazardous substances which are sold in interstate commerce and are intended or suitable for household use."[209] As originally enacted, the law did not contain a preemption provision. However, when the Act was amended in 1966, a preemption provision was added based on the recognition that manufacturers might have to comply with up to fifty different label requirements for a particular hazardous substance if states were free to regulate these labels.[210]

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[206] *Id.*

[207] *Id. See also* Schuver v. E.I. Du Pont de Nemours & Co., 546 N.W.2d 610 (Iowa 1996), *cert. denied*, 117 S.Ct. 274 (1996) (U.S. Supreme Court let stand a decision of the Iowa Supreme Court that claims of strict liability and negligence based on adequacy of warning label on pesticide was preempted under the Federal Insecticide Fungicide and Rodenticide Act); Busch v. Graphic Color Corp., 662 N.E.2d 397, (Ill. 1996), *cert. denied*, 117 S.Ct. 55 (1996) (U.S. Supreme Court let stand a decision of the Illinois Supreme Court that a claim of negligence based on adequacy of warning label on paint stripper was preempted by the Federal Hazardous Substances Act.)

[208] Pub. L. No. 86-613, 74 Stat. 372 (1960).

[209] H.R. REP. NO. 1861, at 2 (1960), *reprinted in* 1960 U.S.C.C.A.N. 2833.

[210] The preemption provision was added by the Child Protection Act of 1966, Pub. L. 89-756, 80 Stat. 1303 (1966). The relevant part provided:

> It is hereby expressly declared that it is the intent of the Congress to supersede any and all laws of the States and political subdivisions thereof insofar as they may now or hereafter provide for the precautionary labeling of any substance or article intended or suitable for household use . . . which differs from the requirements or exemptions of this Act or the regulations or interpretations promulgated pursuant thereto. Any law, regulation, or ordinance purporting to establish such a labeling requirement shall be null and void.

See *Moss v. Parks*, 985 F.2d 736 (4th Cir. 1993), for a discussion of the legislative history of the Federal Hazardous Substances Labeling Act, and its successor, the Federal Hazardous Substances Act.

The current preemption provision states:

> [I]f a hazardous substance or its packaging is subject to a cautionary labeling requirement . . . designed to protect against a risk of illness or injury associated with the substance, no State or political subdivision of a State may establish or continue in effect a cautionary labeling requirement applicable to such substance or packaging and designed to protect against the same risk of illness or injury unless such cautionary labeling requirement is identical . . . ."[211]

Clearly, this provision precludes state regulation of hazardous substance labeling. While it infringes on state regulatory and police powers, the law attempts to balance that infringement against the potential burden that chemical product manufacturers would face if they had to comply with fifty-one separate regulatory schemes promulgated by each state and the federal government.[212]

The same type of preemption exists with regard to pesticides, another set of products that must comply with federal labeling requirements.[213] The Federal Insecticide, Fungicide, and Rodenticide Act[214] establishes a comprehensive scheme of federal regulation for pesticides.[215] Included in this scheme is the regulation of virtually every aspect of pesticide labeling.[216] The EPA specifies the warning language that must be used

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[211] 15 U.S.C. § 1261 note (b)(1)(A) (1994).
[212] Chemical Specialties Manufacturers Ass'n, Inc. v. Allenby, 958 F.2d 941, 950 (9th Cir. 1992).
[213] Federal Insecticide Fungicide and Rodenticide Act § 24 (b), 7 U.S.C. § 136v(b), dealing with the authority of states provides, "State[s] shall not impose or continue in effect any requirements for labeling or packaging in addition to or different from those required under this subchapter."
[214] Pub. L. No. 80-104, 61 Stat. 163 (1947) (codified as amended at 7 U.S.C. §§ 136-136y (1994).
[215] Pesticides may not be legally sold or distributed unless they are registered. 7 U.S.C. § 136a (a). Applications for registration must include extensive data concerning the pesticide's health effects. 7 U.S.C. § 136a (c). Pesticides are registered if they do not cause "unreasonable adverse effects on the environment." 7 U.S.C. § 136a (c)(5).
[216] *See* 40 C.F.R. 156.10 (1997).

on the label as well as where it is placed.[217] Even the type-size of the print on the warning is controlled.[218] Manufacturers may not alter or revise cautions or warnings on the label without EPA approval. Pesticides with labels that do not conform to these requirements are considered misbranded, and the sale or distribution of such pesticides is unlawful under federal law.[219]

Clearly, Congress intended both the FHSA and FIFRA to preempt state regulation of the labeling of hazardous substances and pesticides.[220] The question that arises in toxic tort litigation concerning these products is whether preemption of state regulatory law also precludes state common law tort claims that are based on some aspect of the label, such as the adequacy of the warnings it contains. Prior to 1992, courts were generally split on this issue.[221] In 1992, the Supreme Court held in favor of preemption when the federal government imposes labeling requirements, with its decision in the case of *Cippollone v. Liggett Group, Inc.*[222]

*Cippollone* was not a typical toxic tort, but involved a suit against a tobacco company by a plaintiff whose wife died of lung cancer, allegedly caused by smoking cigarettes. Among other things, the plaintiff claimed that the defendant's product was

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[217] *Id.* at (h).
[218] *Id.* at (a)(2)(ii)(A).
[219] 7 U.S.C. § 136j (a)(1)(E).
[220] "In dividing the responsibility between the states and the federal government for the management of an effective pesticide program, the Committee had adopted language which is intended to completely preempt State authority in regard to labeling and packaging." H.R. REP. NO. 511, at 16 (1972).
[221] Cases finding preemption included: Worm v. American Cyanamid Co., 970 F.2d 1301 (4th Cir. 1992); Arkansas-Platte & Gulf Partnership v. Van Waters & Rogers, Inc., 959 F.2d 158 (10th Cir. 1992); Jordan v. Southern Wood Piedmont Co., 805 F. Supp 1575 (S.D. Ga. 1992); Herr v. Carolina Log Bldgs., Inc., 771 F. Supp. 958 (S.D. Ind. 1989). Cases finding no preemption included: Thorton v. Fondren Green Apartments, 788 F. Supp. 928 (S.D. Tex. 1992); Evenson v. Osmose Wood Preserving, Inc., 760 F. Supp. 1345 (S.D. Ind. 1990); Riden v. ICI Americas, Inc., 763 F. Supp 1500 (W.D. Mo. 1991); Roberts v. Dow Chem. Co., 702 F. Supp. 195 (N.D. Ill. 1988).
[222] 505 U.S. 504 (1992).

defective in that it failed to carry adequate warnings.[223] The defendant responded that the Federal Cigarette Labeling and Advertising Act of 1965,[224] and the Public Health Cigarette Smoking Act of 1969,[225] preempted any state law personal injury claims based on the inadequacy of the warnings contained on their products or in the advertisements for the product.[226]

The Supreme Court held the 1965 Act did not preempt state common law claims based on failure to warn, but the 1969 Act did. This was because a failure to warn claim would necessarily require a showing that some warning in addition to the approved warning was required. However, none was permitted by either the 1965 or 1969 Acts. In addition, the 1969 Act stated that "no requirement or prohibition" concerning cigarette labeling could be imposed by state law. The Court held this included common law claims as well as statutes and regulations since, "state regulation can be as effectively asserted through the award of damages as through some form of preventive relief. The obligation to pay compensation can be, and indeed is designed to be a potent method of governing conduct and controlling policy."[227]

While *Cippollone* provides guidance on the effect of preemption on analogous failure to warn cases involving pesticides, there is still some disagreement over whether

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[223] The case went to trial on claims of failure to warn, design defect, negligence, breach of express warranty, fraudulent misrepresentation, and conspiracy. Cippollone v. Liggett Group, Inc., 893 F.2d 541, 553 (3rd Cir. 1990).

[224] Pub. L. No. 89-92, 79 Stat. 282 (1965) (codified as amended at 15 U.S.C. §§ 1331-1340 (1994)). The relevant part stated, "No statement relating to smoking and health shall be required in the advertising of any cigarettes the packages of which are labeled in conformity with the provisions of this Act." 15 U.S.C. § 1334(b).

[225] Pub. L. No. 91-222, 84 Stat. 87 (1970) (codified as amended at 15 U.S.C. §§ 1331-1340 (1994)). The relevant part states: "No requirement or prohibition based on smoking and health shall be imposed under State law with respect to the advertising or promotion of any cigarettes the packages of which are labeled in conformity with the provisions of this chapter." 15 U.S.C. § 1334(b).

[226] 505 U.S. at 510 (1992).

FIFRA expressly preempts state tort law.[228] Most courts have held that claims that have a basis in warnings are preempted.[229] However, claims that involve some aspect of a pesticide other than the warning are not barred.[230] That was the holding in *Worm v. American Cyanimid Company*.[231] Even though the court dismissed the plaintiff's claims based on injuries caused by a pesticide because the claims were predicated on failure to warn and inadequacy of product labeling, the court also stated, "claims for negligent testing, manufacturing, and formulating . . . are not preempted."[232] Thus, claims based on strict liability for defective design and breach of express warranty, are not necessarily barred.[233] What is clear after *Cippollone*, however, is that state common law causes of action for personal injury as a result of toxic exposure can be preempted by the federal government.[234]

Preemption of common law tort claims by environmental laws illustrates more than just a conflict between federal and state governments. It illustrates the internal conflict that exists in environmental laws between uniform, federal regulation, and preserving common law tort recovery as the sole means of compensating persons injured by toxic exposure. Common law tort recovery will always have some impact on the regulation of

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[227] Cippollone v. Liggett Group, Inc., 505 U.S. 504, 521 (quoting San Diego Bldg. Trades Council v. Garmon, 359 U.S. 236, 247 (1959)).
[228] Brian M. Brown, *Federal Preemption of State Tort Law Failure to Warn Claims by FIFRA: Injury Without Relief?* 4 S.C. ENVTL. L.J. 147, 161 (1995) (discussing post-*Cippollone* FIFRA cases).
[229] *Id. See, e.g.*, Papas v. Upjohn Co., 985 F.2d 516 (11th Cir. 1993), *cert. denied*, 114 S.Ct. 300 (1993).
[230] Papas v. Upjohn Co., 985 F.2d at 520.
[231] 5 F.3d 744 (4th Cir. 1993).
[232] *Id.* at 757
[233] Higgins v. Monsanto Co., 862 F.Supp. 751 (N.D. N.Y. 1994).
[234] Another area where federal preemption issues regularly arise is in the case of drugs and medical devices. Drugs and medical devices are regulated extensively under the Federal Food, Drug and Cosmetic Act, 21 U.S.C. §§ 301-395 (1994 & Supp. I 1995). Courts have found claims involving such items to be preempted in the following cases: Mendes v. Medtronic Corp., 18 F.3d 13 (1st Cir. 1994); King v. Collagen Corp., 983 F.2d 1130 (1st Cir. 1993); Gile v. Optical Radiation Corp., 22 F.3d 540 (3rd Cir. 1994).

activities that effect the environment, regardless of how effective it is at supplementing regulatory law.[235] However, since common law tort recovery arises from a patchwork of state laws, the regulatory signals that it sends will always be jumbled.[236] The easiest way to preclude common law tort recovery from having this unwanted effect is by statutorily preempting it. Preempting state common law causes of action preserves uniformity of environmental regulation, but in doing so frustrates the intent of environmental laws to preserve common law tort recovery.

Clearly, the trend is toward more comprehensive and uniform federal regulation.[237] As the scope of federal regulation grows, the impact of this growth is clear – state common law claims will inevitably be displaced. As a result, the common law that persons injured by toxic exposure must rely on will become even more constrained, exacerbating the inadequacies that already exist.

B. Regulatory Compliance as a Defense

Closely related to federal preemption is the regulatory compliance defense. Just as federal regulations mandate the types of warnings that must accompany some toxic products, federal and state laws comprehensively regulate virtually all aspects of toxic substances.[238] Because of this, when someone is injured by exposure to a toxic substance,

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[235] John Robertson, *"For Our Own Good:" Federal Preemption of State Tort Law – Risk, Regulation, and the Goals of Environmental Protection*, 20 WM. & MARY ENVTL. L. & POL'Y REV. 143 (1995).
[236] *See supra* notes 113-122 and accompanying text.
[237] Percival, *supra* note 75, at 1177.
[238] *See, e.g.*, 40 C.F.R. parts 260-270 (1997). These regulations, which implement the statutory provisions of §§ 3001-3019 of the Resource Conservation and Recovery Act, 42 U.S.C. §§ 6921-6939e (1994 & Supp. I 1995), are commonly referred to as managing hazardous waste from "cradle to grave."

defendants will often try to use compliance with government regulatory standards as a defense. Sometimes this is successful.

Courts have traditionally adopted standards of conduct established by legislation or administrative regulations to define what constitutes reasonable conduct in tort cases.[239] Toxic tort cases are no exception. In *New England Legal Foundation v. Costle*,[240] the court held that the Environmental Protection Agency's approval of a utility's use of high sulfur fuel precluded plaintiffs from maintaining a common-law nuisance action against the utility when the use of that fuel produced allegedly noxious emissions. In *O'Conner v. Commonwealth Edison Company*,[241] the court held that a federal regulation that set a standard for a permissible dose of radiation should be adopted as setting the appropriate standard of care. The court stated, "it is not proper to allow the jury to disregard the federal permissible dose limits and effectively set their own."[242]

However, other courts may recognize compliance with regulatory standards only as some evidence, rather than conclusive evidence, that the defendant has met the appropriate standard of care.[243] This approach recognizes there are a number of problems with adopting regulatory standards as the appropriate standard in tort cases.[244]

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[239] RESTATEMENT (SECOND) OF TORTS § 286 (1965) provides:

> The court may adopt as the standard of conduct of a reasonable man the requirements of a legislative enactment or an administrative regulation whose purpose is found to be exclusively or in part
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> (a) to protect a class of persons which includes the one whose interest is invaded, and
> (b) to protect the particular interest which is invaded, and
> (c) to protect that interest against the kind of harm which has resulted, and
> (d) to protect that interest against the particular hazard from which the harm results.

[240] 666 F. 2d 30 (2d Cir. 1981).

[241] 748 F. Supp. 672 (C.D. Ill. 1990), *aff'd*, 13 F.3d 1090 (7th Cir. 1994).

[242] *Id.* at 676.

[243] RESTATEMENT (SECOND) OF TORTS § 288C, cmt. a (1965) states, "Compliance with a legislative enactment or an administrative regulation does not prevent a finding of negligence where a reasonable man would take additional precautions."

[244] *See* Teresa Moran Schwartz, *Regulatory Standards and Products Liability: Striking the Right*

Regulatory standards are not designed for the tort system. They are designed for public safety, not the safety of specific individuals. Government regulatory standards can quickly become outdated. Since economic considerations are taken into account in setting regulatory standards, agencies and legislatures may be unduly influenced by regulated industries, resulting in regulations that are the product of political influence.[245]

As has already been discussed, regulatory standards that deal with toxic substances often allow, at least statistically, for an additional case of cancer for every million people who are exposed to a toxic substance over a seventy-year lifetime.[246] With over 250 million people in the United States at any one time, this means that the chance of contracting cancer from exposure to toxic substances is not eliminated. In fact, regulatory standards that allow one additional cancer case for every million people, allow for over 250 additional cases of cancer in the United States during a lifetime. Denying compensation to those 250 people because the defendant complied with regulatory standards concerning the substance which caused their cancer seems somewhat unsettling, yet recognition of a regulatory compliance defense could have that effect.[247]

Obviously, defendants in toxic tort cases who have complied with government standards will continue to raise regulatory compliance as a defense as long as courts are willing to defer to those standards as establishing the appropriate standard of care.[248] By

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*Balance Between the Two*, 30 U. MICH. J.L. REF. 431 (1997).

[245] *Id.* at 443.

[246] *See supra* text accompanying notes 85-89.

[247] *See* AMERICAN LAW INST., REPORTER'S STUDY ON ENTERPRISE LIABILITY FOR PERSONAL INJURY, ch. 3 (1991) (proposing recognition of a regulatory compliance defense).

[248] *See, e.g.*, Johnston v. United States, 597 F. Supp. 374, 391 (D. Kan. 1984) where the court made the following comment concerning a regulatory standard: "These two groups of the most knowledgeable and most eminent scientists have spent many hours studying scientific papers that in turn reflect many hours of scientific work in order to determine what levels or amounts of radiation should be considered safe

the same token, plaintiffs may attempt to use failure to comply with regulatory requirements as evidence of negligence.[249] Often a plaintiff will allege that violation of a regulatory requirement entitles him to a negligence *per se* claim.[250] Acceptance of such claims in toxic tort cases has been mixed. Some courts have allowed them to proceed,[251] while others have not.[252] Those courts that have not allowed negligence *per se* claims in toxic torts have pointed out that doing so would engraft additional rights upon statutory provisions that were not contemplated or intended by the legislature.[253] Thus, depending on the jurisdiction, compliance with a regulatory standard may provide a defense in a toxic tort cases even though violation of statutory or regulatory requirements may not support a negligence *per se* claim.

C. The Difficulty of Proving Causation

A fundamental element of every tort is the element of causation. In order to recover damages for his injury, the plaintiff must prove the conduct of the defendant caused his injury.[254] This would seem to be a rather straightforward requirement, and in many tort cases, it is. However, in the realm of toxic torts, which often involve diseases

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enough to use as safety standards. This Court is certainly ill-equipped to second guess those scientists by setting different standards of safety in these tort suits."

[249] *See* Margaret Malone, Note, *EPA Findings of Unreasonable Risk Under the Toxic Substances Control Act: Evidentiary Findings in Toxic Tort Plaintiff's Arsenal*, 23 HOFSTRA L. REV. 173 (1994).

[250] Martin v. Herzog, 126 N.E. 814, (N.Y. 1920).

[251] Ashland Oil, Inc., v. Miller Oil Purchasing Co., 678 F.2d 1293 (5th Cir. 1982) (court implicitly acknowledged negligence *per se* as viable in toxic tort actions while denying liability in this particular case).

[252] German v. Federal Home Loan Mortgage Corp., 885 F. Supp. 537 (S.D.N.Y. 1995); Sanford Street Local Dev. v. Textron, Inc., 768 F. Supp 1218 (W.D. Mich. 1991); Lutz v. Chromatex, 718 F. Supp. 413 (M.D. Pa. 1989).

[253] *See, e.g.*, Lutz v. Chromatex, 718 F. Supp. 413,427 (M.D. Pa. 1989).

that have long latency periods,[255] and are known to occur even in the absence of toxic exposure,[256] proving legal causation can be difficult. In fact, as will be discussed, the level of proof of causation demanded by the courts may be unattainable.

Tort law generally operates within the paradigm of particularistic causation, where a discrete event, or chain of events, produces a given result.[257] A result is viewed as something that would not have occurred "but for" the event or events that supposedly caused it. Where it can be shown that a result would not have occurred but for an event that preceded it, the preceding event is considered the "cause in fact" of the result.[258]

However, cause in fact is not enough. More is required before a cause in fact may be considered a proximate, or legal cause. Otherwise, defendants could be held liable for results that follow from endless chains of events.[259] This further limitation, which amounts to little more than a value judgment of whether a defendant should or should not be held liable based on whether a given result is foreseeable, is referred to as proximate cause.[260]

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[254] RESTATEMENT (SECOND) OF TORTS § 430 (1965).

[255] As used in the toxic tort context, a latency period is the time between exposure and the onset of disease. *See generally* Cipollone v. Liggett Group Inc., 893 F.2d 541 (3rd Cir. 1990) (evidence presented that lung injury caused by smoking early in life was a contributing factor to lung cancer that occurred later in life).

[256] Most diseases caused by toxic contamination are not "signature" diseases, but are the ordinary diseases of life. For example, it is generally recognized that cancer develops even in the absence of exposure to toxic substances. The incidence of disease in the absence of a toxic exposure is referred to as the background rate. Signature diseases are those that have no or negligible background rate. Mesothelioma, a form of lung cancer associated with exposure to asbestos, is an example of a signature disease. *See* Borel v Fiberboard Paper Prods. Corp., 493 F.2d 1076, 1082-1085 (1973) (discussing the history of the recognition by the medical profession of the causal connection between exposure to asbestos and mesothelioma).

[257] *See generally* Brennan, *supra* note 52.

[258] Cause-in-fact exists when the harm suffered by the plaintiff would not have occurred "but for" the conduct of the defendant. KEETON ET AL., *supra* note 102, at 266-68.

[259] "Obviously, the legal test includes a requirement that the wrongful conduct must be the cause in fact of the harm; but if this stood alone the scope of liability would be vast indeed, for the causes of causes are infinite – the fatal trespass done by Eve was cause of all our woe." Fleming James, Jr. & Roger Perry, *Legal Cause*, 60 YALE L. J. 761 (1951).

[260] "Proximate cause refers to that which, in a natural and continuing sequence, unbroken by any efficient intervening cause, produces injury, and without which the result would not have occurred." Wisniewski v. Great Atlantic & Pacific Tea Co., 323 A.2d 744, 748 (Pa. Super. Ct. 1974).

Gathering sufficient proof to meet the requirements of proximate causation is normally not a problem in a toxic tort case involving acute toxic effects. For example, on December 2, 1984, the release of the lethal gas, methyl isocyanate, from a chemical plant operated by Union Carbide India Limited, in Bhopal, India, resulted in the deaths of over 2,000 persons and injuries of over 200,000 more.[261] While the case was never tried in the U.S. (it was dismissed based on considerations of *forum non conveniens*),[262] there was little doubt the deaths and injuries were caused by the deadly gas.

However, when latent toxic effects are involved, as they are in most toxic tort cases, causation of an injury is rarely so clear-cut. A case which presented causation issues typical of those faced by most toxic tort victims was *Elam v. Alcolac, Inc.*[263] In that case, the defendant's chemical plant spewed into the air such chemicals as epichlorophydrin, allyl alcohol, ethyl acrylate, toluene, glycydil ether, cyclohexene, dimethyl sulfate, hydrogen sulfide, methylene chloride, hydrochloric acid, and allyl methacrylate.[264] Some neighbors who were exposed to these emissions developed medical problems, while others did not.[265] In addition to cancer, the chemicals involved allegedly caused such physical maladies as chronic conjunctivitis, rhinitis, bronchitis, gastritis,

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[261] *In re* Union Carbide Corp. Gas Plant Disaster at Bhopal, India in December, 1984, 809 F.2d 195 (2nd Cir. 1987), *cert. denied*, Union of India v. Union Carbide Corp., 484 U.S. 871 (1987).

[262] Ironically, the suit was filed in the U.S. due to favorable perceptions of the American tort system compared to its Indian counterpart. Thus, despite the inadequacies of the U.S tort system discussed in this paper, it is still far more likely to compensate victims of toxic contamination than foreign systems. After being dismissed, the Bhopal case was eventually settled for $470 million, much less than the $3 billion originally sought. The settlement was widely viewed as a victory for Union Carbide. *See* JAMIE CASSELS, THE UNCERTAIN PROMISE OF LAW: LESSONS FROM BHOPAL 223 (1993).

[263] 765 S.W.2d 42 (Mo. App. 1988).

[264] *Id.* at 72-78. These chemicals were used in the production of soaps. Several are known carcinogens and all attack common organ systems: the liver, the immune system and the central nervous system.

[265] *Id.* at 79-80.

dermatitis, and dysfuntion of the liver, genitourinary tract, central nervous system, and immune system.[266]

In cases such as this, courts will often address causation on two levels, referred to as generic and specific causation.[267] Generic causation involves determining if the chemicals in question are capable of causing the alleged injury. If they are, then the court will address the issue of specific causation, which involves determining whether the chemicals in question actually caused the plaintiff's injuries. Unfortunately for many toxic tort victims, they are often unable to clear the hurdle of generic causation. Part of the problem lies with the lack of particularistic evidence that exists concerning disease etiology. Demonstrating that a disease would not have developed "but for" exposure to particular toxic substance is often beyond the capability of science.

Due to the fact that uncertainty exists as to the causes of cancer, and other toxicological effects of most hazardous substances,[268] the best that science can do is produce probabilistic evidence of causation. Probabilistic evidence can be produced in several different ways. For example, carcinogens may be identified by 1) cluster analysis, which analyzes diseases share by members of a group exposed to a single hazardous substance, 2) short-term molecular assays, 3) animal bioassays, and 4) epidemiological

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[266] *Id.* at 89-164.

[267] A court's handling of generic and specific causation is illustrated in the case of *Sterling v. Velsicol*, 895 F.2d 1185 (6th Cir. 1988). The case involved a class of plaintiffs alleging groundwater contamination from a leaking landfill. The court divided the issue of causation into two parts. First, the issue of generic causation was addressed, *i.e.*, whether the defendant's activity was capable of causing the type of harm suffered by the plaintiffs. Once generic causation was established, then the issue of specific causation could be addressed, *i.e.*, whether the defendant's activity was the legal or proximate cause of the harm suffered by individual plaintiffs.

[268] *See* Rosenberg, *supra* note 50, at 856 (explaining that rarely is any toxic agent the exclusive source of a given disease).

studies.[269] These are all scientific methods where hypotheses concerning disease etiology can be statistically tested.[270] Based on the results, a scientific assessment of causation can be made.

This scientific assessment of causation is the evidence plaintiffs must rely on to prove generic causation. Unfortunately for those who must rely on it, probabilistic evidence is not always admitted by courts.[271] Part of the reason involves the law's general skepticism concerning statistics.[272] Even though science recognizes the need to rely on statistical evidence, the law views this type of evidence with disfavor.[273]

Even when such evidence is admissible, and serves to prove generic causation, a plaintiff must still prove specific causation. To get from generic causation to specific causation, probabilistic evidence must be interpreted by a physician, who will then form an

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[269] Brennan, *supra* note 52, at 502.

[270] *Id.*

[271] Of the four types of probabilistic evidence mentioned, the law has looked most favorably on epidemiological evidence. *See, e.g.*, *In re* Agent Orange Prod. Liab. Litig., 611 F. Supp. 1223, 1231 (D.C.N.Y. 1985) (court described epidemiological studies as "the only useful studies having any bearing on causation"). Unfortunately, this evidence is difficult to obtain in toxic tort actions. Epidemiological evidence concerning the long-term effects of many toxic substances has not yet been fully developed. Furthermore, ethical considerations prohibit deliberate testing on human populations. It is much easier to develop evidence based on animal bioassays. However, evidence based on animal studies has not been favorably received. *See, e.g.*, Viterbo v. Dow Chem. Co. 826 F.2d 420 (5th Cir. 1987) (animal studies ruled inadmissible); *In re* Agent Orange Prod. Liability Litig., 611 F. Supp. 1223 (D.C.N.Y. 1985) (animal studies ruled inadmissible); Richardson v. Richardson-Merrell, Inc., 857 F.2d 823 (D.C. Cir. 1988), *cert. denied*, 493 U.S. 882 (1989) (animal data alone insufficient to provide reasonable medical certainty that substance caused birth defects). *See also*, Jack L. Landau & W. Hugh O'Riordon, *Of Mice and Men: The Admissibility of Animal Studies to Prove Causation in Toxic Tort Litigation,* 25 IDAHO L. REV. 521 560-65 (1988-89) (asserting animal studies have no place in the courtroom). *But see*, Brief of the Carnegie Commission on Science, Technology, and Government as *Amicus Curiae* in Support of Neither Party at 23-24, Daubert v. Merell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993) (No. 92-102) (stating that when a plaintiff relies solely on animal studies it may be appropriate to allow such evidence to go before a jury since a high correlation does in general exist with regard to human and animal reactions).

[272] "[M]edical testimony that a particular type of work statistically increases the probability of getting valley fever does not constitute evidence of a causal connection between the disease and employment . . . ." Crim v. International Harvester Co., 646 F.2d 161, 165 (9th Cir. 1981).

[273] *See* Laurence Tribe, *Trial by Mathematics: Precision and Ritual in the Legal Process*, 84 HARV. L. REV. 1329 (1971).

opinion concerning medical causation in a particular individual. Often the physician has no personal knowledge concerning a patient's exposure to a toxic substance, but must rely on what the plaintiff has told him concerning that exposure.

The physician's opinion must merge and translate the scientific process that establishes generic causation with the medical processes that produce the opinion concerning specific causation. Unfortunately, confusion can arise during this translation since scientific and medical notions of causation are not always consistent.[274]

Translating scientific and medical notions of causation into the legal language of causation is a fundamental problem facing toxic tort plaintiffs. One author has noted, "the bottleneck in fighting pollution is the transfer of existing knowledge between the basic scientific community, the regulatory community, and all segments of the legal profession and the public."[275] While scientists and physicians view causation through the perspective of their particular disciplines, judges cling to a traditional view where a chain of events mechanistically leads to a foreseeable result. Thus, while science deals with causation in terms of probabilities, the law requires more particularistic proof of causation. Adding to the confusion are the many policy objectives courts may allow to influence their determinations of proximate cause.[276]

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[274] Lawrence Marino, *The Scientific Basis of Causality in Toxic Tort Cases*. 21 U. DAYTON L. REV. 1, 8 (1995) (distinguishing between scientific and medical experts in toxic tort cases and pointing out that it is no more reasonable to presume that a physician is an expert in the process of scientific inference than it would be to expect a scientist to diagnose and treat disease).

[275] Meyer, *supra* note 22, at 387.

[276] Since tort law is concerned with compensation of victims and deterrence of undesirable conduct, accomplishing one of these "unscientific" objectives may have a significant impact on a legal finding of causation.

The reluctance of many courts to admit probabilistic evidence may be less after the Supreme Court's decision in the case of *Daubert v. Merrill Dow Pharmaceuticals, Inc.*[277] In *Daubert*, the Court addressed the issue of the admissibility of epidemiological evidence and evidence involving animal studies. Prior to the case, such evidence, as well as other scientific evidence, was admitted only if it had gained "general acceptance the particular field to which it belongs."[278] Known as the "Frye" test, the Court held this rigid standard "would be at odds with the liberal thrust of the Federal Rules [of Evidence] and their general approach of relaxing the traditional barrier to opinion testimony."[279] Nevertheless, general acceptance of a scientific theory or technique "can yet have a bearing on the inquiry" of whether the evidence will assist the trier of fact.[280] Whether or not *Daubert* will have an appreciable impact on the admissibility of probabilistic evidence in toxic tort cases remains to be seen, though. As one court put it, "*Daubert* kills *Frye*, then resurrects its ghost."[281]

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[277] 509 U.S. 579 (1993). *But see*, Ellen Relkin, *Some Implications of Daubert and its Potential for Misuse: Misapplication to Environmental Tort Cases and Abuse of Rule 706(a) Court-Appointed Experts*, 15 CARDOZO L. REV. 2255 (1994) (asserting the use of court appointed experts available under Federal Rule of Evidence 706 could undermine the adversarial process and make it more difficult for plaintiffs to prove causation in toxic tort cases).

[278] Frye v. United States, 293 F. 1013, 1014 (1923). "In that case, the Federal District Court for the District of Columbia considered the admissibility of evidence derived from a crude forerunner of the polygraph. Whereas the modern polygraph measures several different physiological responses of the subject being tested, the device under scrutiny in Frye was a "monograph," which measured only blood pressure. Finding the test to be a novel scientific technique. the court enunciated a standard of admissibility in a brief, two-page opinion that would provide a basic framework for the analysis of scientific evidence in the courts of the United States for the next sixty years." Michael N. Schmidt & Steven A. Hatfield, *Scientific Evidence in Courts-Martial: From the General Acceptance Standard to the Relevancy Approach*, 130 MIL. L. REV. 135, 136-37 (1990).

[279] 509 U.S. at 588.

[280] *Id.* at 594.

[281] *In re* Joint E. & S. Dist. Asbestos Litig., 827 F. Supp. 1014, 1033 (S.D.N.Y. 1993) (reviewing federal and state court decisions dealing with causation in toxic tort cases).

Many would argue against a more liberal approach to scientific evidence in tort cases, labeling such evidence as "junk science."[282] However, even with a more liberal approach to admitting evidence, toxic tort victims will continue to face difficulty in receiving compensation for their injuries as long as scientific and medical uncertainty exists as to the cause of their injuries. The fact remains that we just don't know what causes most diseases.[283] In most cases, disease results from a complex interplay of factors, and involves the reaction of a specific organism to a variety of different external forces and events. The degree of certainty required by the law in identifying a particular substance as the cause of a disease or injury, may be more than science and medicine is able to provide.[284]

D. Indeterminate Defendants – Indeterminate Plaintiffs

Assuming that a toxic tort victim can prove that exposure to a toxic substance caused the harm he has suffered, identifying the person who is responsible is necessary. In most tort scenarios, determining who caused the harm isn't difficult. When A runs a stoplight and his vehicle strikes B, injuring him, A has clearly caused the harm. When a factory emits toxic substances that come into contact with an individual, the company that

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[282] *See generally*, Lee Loevinger, *Science and Legal Rules of Evidence: A Review of Galileo's Revenge: Junk Science in the Courtroom*, 32 JURIMETRICS J. 487 (1992).

[283] "Although scientists do not know what causes cancer in humans or how it is caused, they do know that those exposed to certain substances appear to develop cancer more frequently than those not exposed." Julius McElveen, Jr. & Pamela Eddy, *The Problem of Causation and the Use of Epidemiology*, 33 CLEV. ST. L. REV. 29, 35 (1985).

[284] "Courts do not expect discussion of uncertainty from science; they want causal chains that lead to but for causes." Brennan, *supra* note 52, at 492.

owns the factory has caused the harm.[285] However, in some toxic tort situations, determining who caused the harm can be more difficult. Take the case of groundwater contamination that results when toxic substances leach from a landfill. Who caused the harm in such a case? Was it the owner of the landfill, the operator, or any one of a hundred different parties who may have contributed toxic substances to the landfill? Obviously, it's not always easy to tell.

Traditionally, tort law has required an injured party to establish the identity of the person or the instrumentality that caused him harm.[286] If the identity of the person causing the harm could not be established by a preponderance of the evidence, the plaintiff could not recover. Obviously, a strict application of this rule can result in inequity in some circumstances. That was the case in *Summers v. Tice*,[287] where two members of a hunting party negligently fired in the direction of a third member of the party at the same time. The third member was injured, but could not prove which of the two fired the shot that injured him. The court held that, under the circumstances, it was appropriate to shift the burden of proof to the two negligent defendants to prove they did not cause the plaintiff's harm.[288]

The rationale behind this rule of "alternate liability" is that between an innocent plaintiff and two potentially negligent defendants, an evidentiary impasse should be

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[285] Bradley v. American Smelting and Ref. Co., 709 P.2d 782 (Wash. 1985); Elam v. Alcolac, Inc., 765 S.W.2d 42 (Mo. Ct. App. 1988).

[286] "Plaintiff's obligation to identify the manufacturer of the allegedly defective product is inherent in the . . . requirement that plaintiff prove proximate causation." Jefferson v. Lead Indus. Ass'n. Inc., 106 F.3d 1245, 1252 (5th Cir. 1997).

[287] 199 P.2d 1 (Cal. 1948).

[288] *Id.* at 3.

resolved in favor of the innocent party.[289] The theory works well as long as the number of potential defendants is relatively small. The rule was used in *Hall v. E. I. Du Pont de Nemours & Co., Inc.*[290] to shift the burden of proof to six blasting cap manufacturers representing nearly the entire blasting cap industry, after children who were injured by blasting caps were unable to identify the manufacturer of the caps that had injured them. Unfortunately, the rule begins to break down as the number of potential defendants grows. Accordingly, courts have been reluctant to extend the rule to cases with large numbers of potential defendants.

The large number of potential defendants in many toxic tort cases may preclude an injured party from taking advantage of the alternative liability rule. Often a victim will know he has been injured by exposure to a toxic substance or product, and that several potential causes of his exposure exist, but he can't identify who caused the exposure. For example, an individual may know that he has been exposed to asbestos fibers made by several manufacturers, however, he will not know who manufactured the exact fibers that have caused his injury.[291] Or, an individual may know that his groundwater has been

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[289] The rule in *Summers v. Tice* was later incorporated into RESTATEMENT (SECOND) OF TORTS § 433B (1965) which reads as follows:

> Burden of proof
>
> (1) Except as stated in Subsections (2) and (3), the burden of proof that the tortious conduct of the defendant has caused the harm to the plaintiff is upon the plaintiff.
>
> (2) Where the tortious conduct of two or more actors has combined to bring about harm to the plaintiff, and one or more of the actors seeks to limit his liability on the ground that the harm is capable of apportionment among them, the burden of proof as to the apportionment is upon each such actor.
>
> (3) Where the conduct of two or more actors is tortious, and it is proved that harm has been caused to the plaintiff by only one of them, but there is uncertainty as to which one has caused it, the burden is upon each such actor to prove that he has not caused the harm.

[290] 345 F. Supp. 353 (E.D.N.Y. 1972).

[291] *See generally* Celotex Corp. v. Copeland, 471 So.2d 533 (Fla. 1985).

contaminated by a nearby landfill, but the landfill has changed ownership several times and hundreds of different parties have contributed to the landfill.[292]

Most of the law concerning alternative liability as it applies to toxic tort cases has developed in the context of cases involving injuries as a result of diethylstilbestrol (DES), a drug which is a synthetic compound of the female hormone estrogen. DES was marketed as a miscarriage preventative by a number of manufacturers on an experimental basis. Unfortunately, the daughters of those who took the drug showed a high incidence of adenocarcinoma (cancerous vaginal and cervical growths). Because the adverse effect of this medication didn't manifest itself until years after the drugs were taken, most of the injured women were unable to identify the manufacturer of the drug their mothers had taken.

For the most part, courts have been unwilling to apply alternative liability in the DES cases.[293] The primary reason was the perceived unfairness that would result if all the potentially liable parties were not before the court. Unlike *Tice*, which involved two defendants, and *Hall* which involved six, there were hundreds of parties involved in the manufacture and distribution of DES. Most courts are unwilling to shift the burden to defendants when the party who actually caused the harm might not be before the court.

Nevertheless, the fact that not all the defendants are before the court will not always stop the court from shifting the burden of proof to the defendants. In *Sindell v.*

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[292] The Environmental Protection Agency estimates that a significant number of the hazardous waste sites in the United States are "abandoned" and the parties responsible for them will never be located. *See* Ayers v. Township of Jackson, 503 A.2d 287, 299 (N.J. 1987).

[293] *See* Burnside v. Abbot Laboratories, 505 A.2d 973 (Pa. Super. 1985); Collins v. Eli Lilly Co., 342 N.W.2d 37 (Wis. 1984), *cert. denied sub. nom.*, E.R. Squibb & Sons, Inc. v. Collins, 469 U.S. 826 (1984).

*Abbot Laboratories*,[294] the California Supreme Court held that where the plaintiff joins in the action enough defendants so that a "substantial share" of the market is represented, it is appropriate to shift the burden of proof.[295] However, other courts have criticized the holding in *Sindell* and chosen not to follow it.[296] In those jurisdictions, toxic tort victims may be unable to recover for their injuries unless they can identify who caused their injury. Thus, in any case where numerous parties could be responsible for the exposure that caused the harm, victims must bring suit against all these parties, or at least a substantial share of them in jurisdictions that follow *Sindell*, in order to be assured of being able to take advantage of the alternative liability rule.

Even when a toxic tort victim knows who caused his injury, due to the passage of time between exposure and injury, the party that caused the exposure may no longer exist. The responsible company may have gone out of business, or it may have been purchased by another company. Unfortunately for toxic tort victims, the general rule of corporate law is that a successor corporation that buys the assets of another corporation is not liable for the torts of its predecessor.[297]

This rule, which reflects an interest in protecting corporate shareholders, can leave toxic tort victims without a remedy. In *Leo v. Kerr-McGee Chemical Corporation*,[298] plaintiffs alleged their parent's deaths were caused by exposure to toxic substances left on

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[294] 607 P.2d 924 (Cal. 1980), *cert. denied*, 449 U.S. 912 (1980).
[295] *Id.* at 937.
[296] *See* Payton v. Abbot Labs, 512 F. Supp. 1031, (D. Mass. 1981); Griffen v. Tenneco Resins, Inc., 648 F. Supp. 964 (W.D. N.C. 1986); Skipworth v. Lead Indus. Assoc. Inc., 665 A.2d 1288 (Pa. 1995).
[297] *See, e.g.*, Knapp v. North Am. Rockwell Corp., 506 F. 2d 361, 363 (3rd Cir. 1974); Kloberdanz v. Joy Mfg. Co., 288 F. Supp. 817, 820 (D. Colo. 1968). There are four generally recognized exceptions to this rule. They are 1) where the successor corporation consents to the liabilities of the selling corporation, 2) where the purpose of the transaction is to defraud creditors, 3) where the successor corporation is merely a continuation of the selling corporation, and 4) where the transaction is a consolidation or merger.
[298] 37 F.3d 96 (3d Cir. 1994).

land owned by a predecessor corporation of the defendant. The court held that despite the benefits received by the defendant when it purchased the predecessor corporation, those benefits did not justify extending liability to the defendant.[299]

In addition to being sold to a successor corporation, the party who caused the exposure may declare bankruptcy. Tort claimants can be considered creditors under bankruptcy law, and as such, their claims are subject to discharge.[300] The effect of bankruptcy on a toxic tort victim depends on when his claim accrues.[301] To qualify as a creditor, a party must prove its claim arose, "at the time of or before the order for relief concerning the debtor."[302] Thus. a toxic tort victim whose claim accrues prior to the bankruptcy proceeding may participate in the proceeding. If he does not participate in the proceeding, his claim will be extinguished. If his claim accrues after the bankruptcy he may still pursue his claim, but obviously only if the company isn't liquidated by the bankruptcy proceeding.

Corporations have used bankruptcy to manage financial problems produced by toxic tort liability. In 1982, the Johns-Manville Corporation filed for Chapter 11 bankruptcy protection based on liability created by its asbestos products.[303] The proceeding established the Manville Personal Injury Settlement Trust.[304] Ostensibly, the goal of the trust was to compensate persons injured by the corporation's products. In many respects, it has failed. First, between the time Manville filed for bankruptcy in 1982,

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[299] *Id.* at 101.
[300] 11 U.S.C. § 101(9) defines a creditor as an entity with a claim against an estate.
[301] *See* discussion *infra* in the text accompanying notes 361-367 concerning when a claim accrues.
[302] 11 U.S.C. § 101(q)(A)
[303] At the time it filed for bankruptcy, Manville faced thousands of asbestos related lawsuits and was spending $2 million a month on legal costs associated with defending itself. *See* PAUL BRODEUR, OUTRAGEOUS MISCONDUCT: THE ASBESTOS INDUSTRY ON TRIAL 249 (1985).
[304] Kane v. Johns-Manville Corp., 843 F.2d 636, 650 (2d Cir. 1988).

and the time the trust was established in 1988, victims of asbestos-related diseases caused by Manville products had no means of being compensated.[305] Second, it was recognized almost immediately after the trust was established that it was under-funded.[306] It is interesting that although the trust was the indirect product of the common law tort system, it has functioned, albeit ineffectively, as a judicially mandated worker's compensation scheme.[307]

Clearly, the Manville trust has failed to adequately compensate tort victims. On the other hand, it has preserved the corporation. Unlike many of its competitors who were forced into bankruptcy and liquidated as a result of injuries caused by asbestos products, Manville (renamed the Schuller Corporation in March 1996) survived. This did not escape the notice of others subject to mass liability based on toxic products.[308]

While preservation of an ongoing business is one of the goals of bankruptcy, protecting the business from tort liability is not.[309] The use of bankruptcy in this manner is suspect. Using bankruptcy in this manner is all the more suspect when one considers the inability of the Manville trust to adequately compensate toxic tort victims. More importantly though, Manville's bankruptcy and the inadequate settlement trust it created is a clear example of how the common law tort system failed – a failure that stands to be

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[305] Frank J. Macchaiarola, *The Manville Personal Injury Settlement Trust: Lessons for the Future*, 17 CARDOZO L. REV. 583, 597 (1996)

[306] *Id.* at 583.

[307] *Id.* at 597. As of 1996, the trust has only resolved 90,000 of the 286,000 claims it has received. It is virtually certain that future beneficiaries of the trust (claimants) will not be fully compensated, but will receive between 10% and 20% of their settlement amount.

[308] The A.H. Robbins Company, maker of the Dalkon Shield, an intrauterine device that allegedly produces toxic effects filed for Chapter 11 reorganization in 1985. A personal injury compensation trust fund was established and nearly 200,000 claims have been filed against it. *In re* A.H. Robins, Inc., 880 F.2d 694, (4th Cir. 1989), *cert. denied*, 493 U.S. 959 (1989).

repeated in other mass toxic tort cases.[310] As Judge Weinstein has pointed out, "Mass tort cases have outstripped the ability of the common law, with its relatively rigid adherence to precedent, to fashion remedies that adequately address the harms of modern technological society."[311]

Part of the inability of the common law to fashion adequate remedies is a result of an inability to protect future claimants. After all, there's really no way of knowing how many people have been exposed to a toxic substance, and of those, how many will eventually manifest a disease.[312] Any settlement must take these "indeterminate plaintiffs" into account, and any trust established pursuant to a settlement must preserve a portion of its assets for their benefit. However, preserving settlement proceeds for unknown future victims obviously means less for those plaintiffs who already have injuries.

Numerous other problems exist in toxic tort cases whenever mass litigation is involved. A great deal has already been written concerning the mass litigation problems posed by many toxic tort cases.[313] Since the sheer volume of these cases has the potential to overwhelm the judicial system, courts use aggregative procedures such as class actions, multidistrict litigation transfer and consolidation to try to manage them. These procedures often sacrifice the rights of individuals to have their claims heard separately in the interest

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[309] *See* Note, *The Manville Bankruptcy: Treating Mass Tort Claims in Chapter 11 Proceedings*, 96 HARV. L. REV. 1121 (1983) (stating that the Manville filing based on potential tort liability presents a stark contrast to the traditional reorganization case).

[310] Weinstein & Hershenov, *supra* note 122.

[311] *Id.* at 276.

[312] *See* Frank Macchaiarola, *The Manville Personal Injury Settlement Trust: Lessons for the Future*, 17 CARDOZO L. REV. 583, 597 (1996) (citing estimates that the Manville trust will eventually receive 300,000 more claims than it has already received, and citing estimates of the trust's present and future liabilities as somewhere between $17 billion and $21 billion).

[313] *See, e.g.*, Weinstein & Hershenov, *supra* note 122.

of judicial efficiency.[314] Thus, a person injured by a toxic substance may find himself as a faceless member of a class action with virtually no voice in how he will be compensated for his injury.[315]

E. Compensation for Injuries – What Injury?

Up to this point, this paper has discussed how the common law has struggled to accommodate many of the unique aspects of toxic torts. This struggle has been especially vigorous where the law has tried to define exactly what "injury" the plaintiff has suffered and what he may recover from the defendant who caused that injury.

The injuries for which a toxic tort victim may receive compensation depends, to some extent, on the common law theory under which recovery is obtained. For example, nuisance and trespass, two commonly used theories, involve injury to property interests. If a plaintiff suffers injury to a property interest, he may recover for loss of property value, as well as the emotional distress related to "discomfort and annoyance."[316] In the case of

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[314] "The systemic urge to aggregate litigation must not be allowed to trump our dedication to individual justice, and we must take care that each individual plaintiff's – and defendant's – cause not be lost in the shadow of a towering mass litigation." Malcom v. National Gypsum Co., 995 F.2d 346 (2d Cir. 1993).

[315] In many mass tort resolutions "the value of removing great burdens on the courts and of achieving closure for the parties and society – were elevated above the concerns of giving individual due process or of following strict rules of law." Weinstein & Hershenov, *supra* note 122, at 318.

[316] RESTATEMENT (SECOND) OF TORTS § 929 (1977) states:

> (1) If one is entitled to a judgment for harm to land resulting from a past invasion and not amounting to a total destruction of value, the damages include compensation for
>
> (a) the difference between the value of the land before the harm and the value after the harm, or at his election in an appropriate case, the cost of restoration that has been or may be reasonably incurred,
>
> (b) the loss of use of the land, and
>
> (c) discomfort and annoyance to him as an occupant.
>
> (2) If a thing attached to the land but severable from it is damaged, he may at his election recover the loss in value to the thing instead of the damage to the land as a whole.

*Ayers v. Township of Jackson*,[317] plaintiffs were left without running water for twenty months after their ground water was contaminated by a nearby landfill. They prevailed on a nuisance theory and, in addition to recovering for the loss of value of their property, were able to recover for "inconveniences, aggravation, and unnecessary expenditure of time and effort related to the use of the water hauled to their homes, as well as to other disruption in their lives, including disharmony in the family unit."[318]

The *Ayers* case illustrates how injury in the form of emotional distress often arises in toxic tort cases. However, in the absence of a property interest, toxic tort victims may be unable to recover for emotional distress caused by exposure to toxic substances. Traditional common law tort principles require a physical injury before a plaintiff can recover such damages in a negligence case.[319] The same is true in cases of strict liability. The physical injury requirement serves as a sort of "screening device" that provides objective evidence of what is otherwise inherently subjective.[320] If a physical injury is shown, the plaintiff may recover for any damages associated with that physical injury, including emotional distress.[321] This physical injury requirement poses unique challenges in toxic tort cases.

In many toxic tort cases, it is not readily apparent the plaintiff has suffered a physical injury. Most toxic substances produce latent diseases as opposed to traumatic,

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[317] 525 A.2d 287 (N.J. 1987).
[318] *Id.* at 289.
[319] *See, e.g.*, RESTATEMENT (SECOND) OF TORTS § 436A (1965) which states, "If the actor's conduct is negligent as creating an unreasonable risk of causing either bodily harm or emotional disturbance to another, and it results in such emotional disturbance alone, without bodily harm or other compensable damage, the actor is not liable for such emotional disturbance."
[320] Consolidated Rail Corp. v. Gottshall, 512 U.S. 532, 557 (1994). "[T]he common law restricts recovery for negligent infliction of emotional distress on several policy grounds: the potential for a flood of trivial suits, the possibility of fraudulent claims that are difficult for judges and juries to detect, and the specter of unlimited and unpredictable liability."

visible injuries. Nevertheless, when someone is exposed to a toxic substance, it would seem intuitively obvious that some physical injury has been suffered. The way common law courts have struggled with the physical injury requirement in a toxic tort scenario is illustrated in the case of *Laxton v. Orkin Exterminating Corporation.*[322]

In *Laxton,* a family's well water was contaminated when the defendant used chlordane and heptachlor to treat the family's house for termites. Medical tests done after the family consumed some of the water showed no abnormalities. Nevertheless, the plaintiffs worried for the health of their children. The more the plaintiffs learned about chlordane, the more worried they became, however this mental anxiety did not manifest itself in a physical way, nor did it require medical treatment.

The plaintiffs brought an action to recover damages for personal injury and property damage, including mental anguish, based on negligence. At the trial level, the plaintiffs prevailed. However, the emotional distress damages were initially dismissed on appeal, based on traditional common law principles that held there could be no recovery for shock or fright unless it manifests itself in physical injury or physical pain.[323] Ultimately, the Tennessee Supreme Court held that ingestion of contaminated water was an "injury" sufficient enough to justify the plaintiff's recovery for their natural concern for the welfare of themselves and their children. The trial court's instruction to the jury, that stated any ingestion of toxic substance would at least be a technical injury, and any

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[321] RESTATEMENT (SECOND) OF TORTS § 436A (1965).
[322] 639 S.W.2d 431 (Tenn. 1982).
[323] *Id.* at 431.

physical injury at all would result in attendant mental pain and suffering being compensable, was upheld.[324]

*Anderson v. Grace*[325] was another case where the court showed flexibility in finding a physical injury. Like *Laxton*, the case involved groundwater contamination and ingestion of the contaminated water by plaintiffs. The court found that cellular changes brought about by ingestion of contaminated water provided sufficient physical injury for the recovery of emotional distress.[326] Based on these physical injuries, the plaintiffs could recover for emotional distress from their own injuries. However, the court would not go so far as to allow the plaintiffs to recover damages for the emotional distress they suffered as a result of witnessing their children die of leukemia. According to the court, emotional distress based on injury to someone else, that was built up over time, and not the result of dramatic, traumatic shock, could not be compensated.[327] Thus, while the court was flexible enough to make an accommodation to a unique aspect of a toxic tort by recognizing cellular damage as a physical injury, it still clung to traditional notions concerning recovery for emotional distress based on injury to others.

As *Anderson* illustrates, toxic torts can produce unique types of emotional distress. One such unique version of emotional distress involves the fear of future disease. In many toxic tort cases, plaintiffs who are exposed to toxic substances seek to recover for

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[324] While the *Laxton* court clung to the physical injury requirement, allowing damages for emotional distress only after a "technical" physical injury was proven, Tennessee recently abandoned the physical injury requirement altogether in *Camper v. Minor*, 915 S.W.2d 437 (Tenn. 1996).

[325] 628 F. Supp. 1219 (1986).

[326] *Id.* at 1226.

[327] *Id.* at 1228-29. The court cited the three traditional limitations on recovery of a bystander for emotional distress resulting from injuries received by another person – these limitations required physical, temporal and familial proximity to the victim. *See* KEETON ET AL., *supra* note 102, at 366. While the requirements of physical and familial proximity were met by the parent-child relationship, there was no

emotional distress based on a fear of developing a disease, usually cancer, sometime in the future. Again, the existence of a physical injury becomes relevant. However, because of the long latency periods involved with many diseases, a plaintiff may not have a present physical injury. Thus, courts must struggle with the issue of whether damages for fear of a future disease can be recovered in the absence of a physical injury.

Courts do not always require a physical injury in order to justify damages for fear of a future disease. As previously mentioned, the purpose of the physical injury requirement is to provide some objective manifestation of an injury that is otherwise the product of subjective emotions. Courts have recognized in some cases where there was no physical injury, there may be other "guarantees of genuineness" that justify damages for emotional distress.[328]

However, many courts continue to employ a physical injury requirement. For example, in *Capital Holding Corporation v. Bailey*,[329] the Kentucky Supreme Court held that a physical injury was required before there could be recovery for fear of cancer. In addition, even if a court does not require the showing of a physical injury, the "guarantees of genuineness" it requires may be difficult to provide. In *Potter v. Firestone Tire & Rubber Co.*,[330] the court held:

> [I]n the absence of a present physical injury or illness, recovery of damages for fear of cancer in a negligence action should be allowed only if the plaintiff pleads and proves that the fear stems from a knowledge, corroborated by reliable medical and

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temporal proximity due to the lapse in time from exposure to the onset of the disease which killed the children.

[328] *See, e.g.*, Potter v. Firestone Tire & Rubber Co., 863 P.2d 795, 810 (Cal. 1993) (rejecting the physical injury requirement as a "hopelessly imprecise screening device").

[329] 873 S.W.2d 187 (Ky. 1994).

[330] 863 P.2d 795 (Cal. 1993).

> scientific opinion. that it is more likely than not that the feared cancer will develop in the future due to the toxic exposure.[331]

The *Potter* requirement that the disease be more likely than not to develop blurs the distinction between fear of future disease claims, which are a type of emotional distress, and claims based on the enhanced risk of developing a future disease. Enhanced risk claims are different from fear of future disease claims in that they compensate victims, not for fear of developing a disease, but for the increased likelihood they will develop the disease.

Enhanced risk claims developed because statutes of limitations often extinguished causes of action for injuries with long latency periods. Typically, a tort victim would be exposed to a toxic substance, but would not know the full measure of the damages he suffered until many years later when a disease first appeared. By that time, the applicable statute of limitations might have run. As a result, those who were exposed to toxic substances were forced to file suit before the statute of limitations ran and attempt to recover for a disease that might manifest itself in the future.

Unfortunately for toxic tort victims, most courts have dealt with the issue of enhanced risk in the same manner as the *Potter* court, allowing recovery only when it is more likely than not that the disease will actually manifest itself.[332] The problem with this

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[331] *Id.* at 800. The court also held that an exception to this general rule is warranted if the toxic exposure that has resulted in the fear of cancer is caused by conduct amounting to "oppression, fraud, or malice." In other words, a plaintiff would be allowed to recover without having to show that it is more likely than not that cancer will occur, so long as the plaintiff's fear is otherwise serious, genuine and reasonable. This exception recognizes the general rule that a physical injury is not required to recover damages for emotional distress when an intentional tort is involved.

[332] Sterling v. Velsicol Chem. Corp., 647 F. Supp. 303 (W.D. Tenn 1986), *aff'd in part, rev'd in part on other grounds*, 855 F.2d 1188 (6th Cir. 1988); Hagerty v. L. & L. Marine Servs. Inc., 788 F.2d 315 (5th

arbitrary approach is that it can produce inequitable results. This inequity was aptly described in the dissenting opinion in the case of *Mauro v. Raymark*:[333]

> This suggests, for example, that if a plaintiff has a 51% chance of developing cancer, his or her damage claim would be decided by a jury. This line drawing, however, seems unfair and arbitrary. For example, why should a plaintiff recover for a 51% risk of developing prostate cancer where the normal person's risk may be 30% (a 21% increase due to defendant's conduct) but not an individual who has a 25% risk of skin cancer where the normal person's risk is 1% (a 24% increase due to defendant's conduct)? It would be more fair and just if the jury could weigh the enhanced risk of cancer with the defendant's conduct in causing plaintiff's current condition and then assess the appropriate damages to compensate plaintiff adequately.[334]

The dissent went on to point out no person in her right mind would trade places with someone who has been exposed to a toxic substance. That being the case, exposure should be compensable even if the victim's chances of developing a disease was less than 50%.[335]

In struggling to deal with the inequity that can result in denying recovery to a plaintiff who has an increased chance of contracting a disease, but is not "more likely than not" to develop the disease, courts have allowed damages for "medical monitoring." Medical monitoring damages are aimed at compensating victims of toxic exposure by providing the medical care necessary to detect the development of disease as early as possible. Such damages can be awarded where the likelihood of contracting a disease, while less than reasonably probable, is still significant. The prevailing standard was set out

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Cir. 1986) *modified on other grounds*, 797 F.2d 256 (5th Cir. 1986); Anderson v. W. R. Grace & Co., 628 F. Supp.1219 (D. Mass. 1986).

[333] 561 A.2d 257 (N.J. 1989).

[334] *Id.* at 270.

by the court in the case of *In re Paoli Railroad Yard PCB Litigation.*[336] There the court required "significant exposure to a proven hazardous substance and a significantly increased risk of contracting a serious latent disease" before damages for medical monitoring could be awarded.[337] Other courts have followed this standard.[338]

Rather than rely on state common law, in several toxic tort cases plaintiffs have asserted a federal statutory basis for medical monitoring damages.[339] The Comprehensive Environmental Restoration, Compensation and Liability Act[340] provides that private parties can recover "response costs" from those who release hazardous substances into the environment.[341] The term "response costs" is not defined and some have asserted it includes the cost of medical monitoring for those exposed to toxic substances. The courts have not completely foreclosed the possibility of recovering medical monitoring damages under CERCLA. Several courts have noted that under the right set of facts, such damages might be recoverable.[342] On the other hand, the two Circuit Courts of Appeal that have reviewed the issue have concluded that medical monitoring damages are not authorized.[343] Both courts focused on the

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[335] *Id.* at 271.
[336] 916 F.2d 829 (3rd Cir. 1990).
[337] *Id.* at 852.
[338] Building and Constr. Dept. v. Rockwell Int'l., 7 F.3d 1487 (10th Cir. 1993); Abuan v. General Elec. Co., 3 F.3d 329 (9th Cir. 1993).
[339] *See, e.g.*, Daigle v. Shell Oil Co., 972 F.2d 1527 (10th Cir. 1992).
[340] 42 U.S.C. §§ 9601-9675 (1994 & Supp. I 1995).
[341] 42 U.S.C. § 9607 (a)(4)(B).
[342] Brewer v. Ravan, 680 F. Supp. 1176, 1180 (M.D.Tenn.1988) ("the Court cannot say that it appears beyond doubt that plaintiffs can prove no set of facts in support of their CERCLA claim"); Jones v. Inmont Corp., 584 F.Supp. 1425, 1430 (S.D. Ohio 1984) ("In light of the present procedural posture of the case, we cannot say as a matter of law that the plaintiffs are not so entitled"); Williams v. Allied Automotive, Autolite Div., 704 F.Supp. 782, 784 (N.D. Ohio 1988) ("costs of future medical monitoring are not categorically unrecoverable as response costs under CERCLA").
[343] Durfey v. E. I. DuPont de Nemours Co., 59 F.3d 121 (9th Cir. 1995); Price v. United States Navy, 39 F.3d 1011 (9th Cir. 1994); Daigle v Shell Oil Co., 972 F.2d at 1535 (10th Cir. 1992). A claim for medical monitoring under CERCLA was brought before the Third Circuit Court of Appeals in *Redland Soccer*

fact that medical monitoring "smacks of a cause of action for damages resulting from personal injury," which was at odds with the legislative history of CERCLA.[344] Thus, toxic tort victims must look to state instead of federal law to find a basis for medical monitoring damages.

The conflicting common law standards that have developed with respect to awards for fear of disease, enhanced risk of disease and medical monitoring reflect the struggle of the courts in dealing with the unique injuries that result from toxic exposure. Recently, the U.S. Supreme Court addressed these issues in the case of *Metro-North Commuter Railroad Company v. Buckley*.[345] The case involved claims under the Federal Employers' Liability Act[346] for emotional distress in the form of fear of future disease, and medical monitoring, both based on exposure to asbestos fibers. The Court reversed the ruling of the Second Circuit Court of Appeals that contact with asbestos fibers was a sufficient "physical impact" to justify damages for emotional distress[347] The Court held that not every simple physical contact, particularly those that amounted to no more than an exposure to a substance that might cause disease at a later time, constituted a sufficient impact to justify damages.[348]

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*Club, Inc., v. Department of the Army*, 55 F.3d 827, 848 (3d Cir. 1995) but the court did not address the issue since the plaintiffs failed to introduce sufficient evidence of a need for medical monitoring.

[344] Daigle, 972 F.2d at 1535 (10th Cir. 1992). As has already been mentioned, Congress considered including in CERCLA a private cause of action for personal injury, but instead chose to let those injured by toxic exposure seek recovery under state common law. *See supra* notes 90-101 and accompanying text.

[345] No. 96-320, 1997 WL 338550 (U.S. June 23, 1997).

[346] 45 U.S.C. §§ 51-60 (1994 & Supp. I 1995). In general, the Federal Employers' Liability Act provides that a common carrier by railroad is liable to any person for injuries suffered while employed by the carrier, due to the negligence of the carrier.

[347] Buckley v. Metro-North Commuter R.R., 79 F.3d 1337 (2d Cir. 1996).

[348] "Taken together, language and cited precedent indicate that the words "physical impact" do not encompass every form of "physical contact." And, in particular, they do not include a contact that amounts to no more than an exposure – an exposure, such as that before us, to a substance that poses some future risk of disease and which contact causes emotional distress only because the worker learns that he may become ill after a substantial period of time." Metro-North

With its holding, the Court showed an unwillingness to depart from traditional common law principles concerning awards for emotional distress in the absence of a physical injury.[349] Citing *Consolidated Rail Corporation v. Gottshall*,[350] the Court clung to the requirement that there be some tangible manifestation of injury before emotional distress damages could be awarded, refusing to employ a more progressive "genuineness" test:

> [T]esting for the "genuineness" of an injury alone . . . would be bound to lead to haphazard results. Judges would be forced to make highly subjective determinations concerning the authenticity of claims for emotional injury, which are far less susceptible to objective medical proof than are their physical counterparts. To the extent the genuineness test could limit potential liability, it could do so only inconsistently.[351]

In addition to limiting recovery for emotional distress under the Federal Employers' Liability Act, the Court also imposed a significant limitation on the recovery of medical monitoring damages. The Court held there was no common law support for a "full-blown, traditional tort law cause of action for lump-sum damages" for medical monitoring in the absence of a physical injury or symptoms of a disease.[352] The Court did not completely foreclose the award of medical monitoring damages in the absence of an injury or symptoms, but indicated that special limitations should be placed on those awards

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Commuter R.R. Co. v. Buckley, No. 96-320, 1997 WL 338550, at *6 (U.S. June 23, 1997).
[349] *Id.*
[350] 512 U.S. 532 (1994).
[351] Metro-North Commuter R.R. Co. v. Buckley, No. 96-320, 1997 WL 338550, at *7 (U.S. June 23, 1997) citing Gottshall, 512 U.S. at 552.
[352] *Id.* at *12.

under such circumstances, such as "a court-supervised fund to administer medical-surveillance payments."[353]

*Metro-North Commuter Railroad Company* illustrates that judicial opinion in the United States is generally unwilling to depart from traditional common law principles in dealing with the unique aspects of toxic torts.[354] As mentioned earlier, another one of the unique and distinguishing features of toxic torts is that the injuries a plaintiff suffers may not manifest themselves until long after the exposure that caused them.[355] In such cases, statutes of limitations may preclude the plaintiff from bringing suit.

F. Statutes of Limitations

Statutes of limitations bar causes of action brought after a designated time period.[356] Initially applied only in the context of criminal actions and claims involving real property, eventually their application was extended to torts.[357] There are many valid reasons for applying statutes of limitations to tort actions. One reason involves accuracy. Requiring actions to be brought promptly aids in a more accurate determinations of the facts of a case since evidence and memories fade as time goes by.[358] In addition, prompt

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[353] *Id.*

[354] *See id.* at *6 where the Court notes that "with only a few exceptions, common law courts have denied recovery to those who . . . are disease and symptom free."

[355] *See supra* text accompanying note 139.

[356] *See, e.g.*, 45 U.S.C. §§ 56, which establishes a three year statute of limitations for actions brought under the Federal Employers' Liability Act: "No action shall be maintained under this chapter unless commenced within three years from the day the cause of action accrued."

[357] *See* Developments in the Law, *Statutes of Limitations*, 63 HARV. L. REV. 1177, 1192 & n. 148 (1950).

[358] Order of R.R. Telegraphers v. Railway Express Agency, 321 U.S. 342, 348-49 (1944). "Statutes of limitation, like the equitable doctrine of laches, in their conclusive effects are designed to promote justice by preventing surprises through the revival of claims that have been allowed to slumber until evidence has been lost, memories have faded, and witnesses have disappeared. The theory is that even if one has a just

notice of a claim allows a defendant time to preserve evidence he might otherwise dispose of. Other reasons include judicial efficiency and providing defendants a sort of "safe harbor" – a time beyond which they may be confident in the knowledge they will not be sued.[359]

Unfortunately, statutes of limitations were not conceived with toxic tort cases in mind. As a result, the effect they have had in many cases has been arbitrary and unfair. This effect can be the result of a state's law that provides different statutes for different causes of action, or it can result from state to state differences. For example, many states provide shorter statutes of limitations for torts such as battery and negligence, than for torts based on a property interest, such as trespass.[360] Thus, a toxic tort victim who has a property interest may have more time within which to bring a suit. Second, statutes of limitations can differ from state to state. Since limitations can vary depending both on the cause of action and the state in which the action is brought, plaintiffs may forum shop to find a state where they may bring an action.

However, the primary problem with statutes of limitations in toxic tort cases is the fact that if they are read literally, they bar most actions. Here, an example is helpful. Imagine that a landfill is operated negligently. As a result, toxic substances leach into the groundwater. Ten years later, the substance has migrated to the plaintiff's well, contaminating his water. Ten years after he begins ingesting the water, the plaintiff

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claim it is unjust not to put the adversary on notice to defend within the period of limitation and that the right to be free of stale claims in time comes to prevail over the right to prosecute them."

[359] Michael Green, *The Paradox of Statutes of Limitations in Toxic Substances Litigation*, 76 CALIF. L. REV. 965, 980 (1988) (discussing the various reasons for statutes of limitations).

[360] *See, e.g.*, IDAHO CODE 5-219 (1996) (establishing two year statute of limitations for actions based on battery and negligence) and IDAHO CODE 5-218 (1996) (establishing three year statute of limitations for actions based on trespass).

develops cancer. His state has a two year statute of limitations for actions based on negligence that begins to run when his claim "accrues."[361] Accrual is defined as the "time of occurrence, act, or omission complained of."[362] In this example, since the negligent act of the defendant occurred twenty years ago, the plaintiff's claim is barred.

This scenario can occur any time the plaintiff's injury is separated in time from the defendant's actions. Due to the long latency period of the diseases caused by toxic contamination, it happens regularly in toxic tort cases. Whenever the statute of limitations is applied literally in these cases, the plaintiff's claim will be barred.[363]

Since the manifestation of disease in toxic tort victims can be tens of years after exposure, or even among members of the next generation as in the DES cases, statutes of limitations have the potential to bar virtually every toxic tort claim. Recognizing the inequity of barring a claim for an injury before its existence was even known, courts and legislatures responded with "discovery" rules.[364] Discovery rules define the point in time when a plaintiff's claim accrues as something other than the act of the defendant or the last exposure to a toxic substance. These rules define accrual variously as when the injury is discovered,[365] when the injury and its cause are discovered,[366] or when the injury, cause, and the availability of a legal remedy are all known.[367]

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[361] *See, e.g.*, IDAHO CODE 5-219 (1996).
[362] Knudsen v. Agee, 918 P.2d 1221, 1223 (Idaho 1996).
[363] *See, e.g.*, Bassham v. Owens-Corning Fiber Glass Corp., 327 F. Supp. 1007 (D.C.N.M. 1971). The court dismissed the action on the basis that strict liability was not applicable to asbestos, but stated that even if manufacturers of asbestos products could be held liable on strict liability theory, any exposure which occurred more than three years before filing of action would be barred by New Mexico statute of limitations. *Id.* at 1008.
[364] Urie v. Thompson, 337 U.S. 163 (1949).
[365] Keith-Popp v. Eli Lilly & Co., 639 F. Supp. 1479 (W.D. Wis. 1986).
[366] Woodruff v. A.H. Robins Co., Inc., 742 F. Supp. 228 (5th Cir. 1984).
[367] Rose v. A.C. & S. C. Inc., 796 F.2d 294 (9th Cir. 1986).

From the point of view of a toxic tort victim, discovery rules are a definite improvement over the literal application of statutes of limitation. Prior to their adoption, statutes of limitation were recognized as the most serious obstacle in obtaining recovery in toxic tort cases.[368] However, the adoption of discovery rules has been inconsistent.[369] Naturally, this leads to forum shopping as a plaintiff must seek a jurisdiction that will not dismiss his claim.

A federal discovery rule exists for certain toxic tort actions, courtesy of the Superfund Amendments and Reauthorization Act of 1986.[370] This law preempts state statutes of limitations for all common law torts resulting from hazardous substances, pollutants, or contaminants. The statute imposes a discovery rule that defines accrual of a claim as the time "the plaintiff knew (or reasonably should have known) that the injury or property damages . . . were caused or contributed to by the hazardous substance or pollutant or contaminant."[371] Since this statute of limitations applies only to hazardous substances, pollutants, or contaminants, all of which are specifically defined, it does not apply to all toxic tort actions.

Even though discovery rules provide plaintiffs an opportunity to pursue claims that would otherwise be barred by a literal reading of most statutes of limitation, plaintiffs may still be in a quandary as to when to file their claims in jurisdictions that employ a broad transactional test for purposes of *res judicata* and subsequent claim preclusion.

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[368] *See* Robert St. Leger Goggin & Thomas A. Brophy, *Toxic Torts: Workable Defenses Available to the Corporate Defendant*, 28 VILL. L. REV. 1208, 1216 (1983) (At the time, lawyers representing asbestos manufacturers characterized the statute of limitations as the most successful defense in asbestos litigation).

[369] New York did not adopt a discovery rule until 1986. *No Way to Treat New York's Asbestos Victims*, N.Y. TIMES, Nov. 25, 1986, at 19, col. 1.

[370] Pub. L. No. 99-499, 100 Stat. 1613 (1986).

[371] 42 U.S.C. § 9658 (b)(4)(A) (1994).

Generally speaking, a plaintiff must bring all claims, and sue for all relief to which he is entitled, arising out of the "transaction or series of transactions" in question, in a single suit or his claims will be barred.[372] As has already been discussed, the problem in many toxic tort cases is that the full measure of a plaintiff's injury in the form of a latent disease may not manifest itself until many years after exposure. However, symptoms of the disease may appear much earlier. Once symptoms appear, the plaintiff's claim accrues, since he has knowledge of the injury, even if the full extent of the injury is unknown.

Thus, a toxic tort victim may be forced to bring suit shortly after learning of his injury even though the full extent of the injury is unknown. Unfortunately, however, if the jurisdiction in which he brings suit does not recognize a claim for enhanced risk of disease, or if he is unable to meet the burden of an enhanced risk claim, i.e., it's more likely than not that he will develop the disease, he may be unable to recover at all.[373] If the plaintiff does recover for enhanced risk, he may be unable to subsequently recover if the disease actually manifests itself.[374]

It is clear that the legal concepts of statutes of limitations and claim preclusion are in conflict in the typical toxic tort case. The goal of these concepts – judicial efficiency

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[372] RESTATEMENT (SECOND) OF JUDGMENTS § 24 (1980) provides:

> When a valid and final judgment rendered in an action extinguishes the plaintiff's claim pursuant to the rules of merger or bar . . . the claim extinguished includes all rights of the plaintiff to remedies against the defendant with respect to all or any part of the transaction, or series of connected transactions, out of which the action arose.

[373] Adams v. Johns-Manville Sales Corp., 727 F.2d 533 (5th Cir. 1984) *modified on petition for reh'g*, 752 F.2d 1004 (5th Cir. 1985). In this case plaintiff sued asbestos manufacturers after being diagnosed with pleural calcification and abnormal breathing sounds. However, he had not yet developed asbestosis. The court refused to allow damages for enhanced risk of future cancer. Although the jury found defendant's product was defective, it awarded no damages.

[374] *See, e.g.*, Graffagnino v. Fibreboard Corp., 776 F.2d 1307, 1308 (5th Cir. 1985) ("[E]xposure to asbestos can give rise to only a single cause of action for all injuries that are caused by that exposure, whether or not all the injuries have become manifest at the time the cause of action accrues."); Gideon v. Johns Manville Sales Corp., 761 F.2d 1129,1137 (5th Cir. 1985) ("[P]laintiff could not split his cause of

and the protection of defendants from stale claims – exacts too large a price from victims of toxic exposure.[375] The unfair impact statutes of limitation have on toxic tort victims has even prompted a call for their complete abolition in toxic tort cases.[376] Whether or not such a draconian step is necessary is subject to debate, however, the fact remains that statutes of limitation create yet another barrier to recovery for toxic tort victims.

## G. The Federal Government as Defendant

### 1) The Nation's Worst Polluter

The United States government is responsible for many of the environmental problems that plague our country. Historically, federal policies have focused almost exclusively on developing the nation's natural resources while ignoring environmental impacts.[377] In addition, the sheer size of some federal agencies, coupled with the environmentally incompatible nature of the tasks they perform, has caused serious damage and continuing problems. This is particularly true with respect to the Department of Defense (DOD) and the Department of Energy (DOE). It has been alleged that the federal

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action and recover damages for asbestosis, then later sue for damages caused by such other pulmonary disease as might develop, then still later sue for cancer should cancer appear.").

[375] Green, *supra* note 359, at 1001. The author notes that statutes of limitation force plaintiffs to file suits prematurely, and the single judgment rule forces courts to predict the future injuries that may result from exposure. As a result, many plaintiffs will be undercompensated, while others may be overcompensated.

[376] *Id.* at 968.

[377] *See* North Buckhead Civic Ass'n v. Skinner, 903 F.2d 1533 (11th Cir. 1990), where the court noted, "Prior to the passage of the National Environmental Policy Act (NEPA), environmental considerations were systematically underrepresented in the federal agency decision making process. Consistent with traditional notions of natural resource allocation, the benefits of development were overstressed and less environmentally damaging alternatives for meeting program objectives were often given limited consideration." *Id.* at 1539,1540.

government is the nation's largest polluter, and the DOD and the DOE are the worst offenders.[378]

According to a Congressional Budget Office report, there are 27,700 potentially contaminated sites on more than 9,700 military installations and former defense properties.[379] The DOD has already spent $11 billion trying to clean up these sites and has estimated it will cost $30 billion more to finish the job.[380] For its part, the DOE produced massive amounts of highly toxic radioactive waste during this country's fifty-year effort to construct nuclear weapons. Referred to by many as the "cold war mortgage," the inventory of toxic waste managed by the DOE is truly astonishing.[381] DOE estimates the ultimate cost of cleaning up this toxic legacy at $227 billion.[382] Estimates to clean up all the contaminated sites on all federal facilities run as high as $400 billion.[383]

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[378] Kyle Bettigole, *Defending Against Defense: Civil Resistance, Necessity and the United States Military's Toxic Legacy*, 21 B.C. ENVTL. AFF. L. REV. 667 (1994) (urging civil resistance as a means to counter the environmental threat posed by the Department of Defense and the Department of Energy). *See also*, Bruce Van Voorst, *A Thousand Points of Blight; From Fuel Spills and Toxic Wastes to Live Shells and Lethal Landfills, the U.S. Military is the Nation's No. 1 Polluter,* TIME, Nov. 9, 1992, at 68 (discussing the toxic waste problem on military installations.)

[379] CONGRESSIONAL BUDGET OFFICE, CLEANING UP DEFENSE INSTALLATIONS: ISSUES AND OPTIONS 3, 1995.

[380] *Id.* at 7.

[381] *See* U.S. DEPARTMENT OF ENERGY, DRAFT WASTE MANAGEMENT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT DOE/EIS-0200-D (Summary) (1995). DOE is currently managing the following quantities of radioactive waste, categorized in descending order based on degree of radioactivity:

> High-Level Waste - 399,000 cubic meters stored.
>
> Transuranic Waste - 69,000 cubic meters currently stored with an estimated 38,000 cubic meters to be generated over the next 20 years.
>
> Low-Level Waste - 114,000 cubic meters currently stored with an estimated 1,370,000 cubic meters to be generated over the next 20 years.
>
> Low-Level Mixed Waste - 82,000 cubic meters currently stored with an estimated 144,000 cubic meters to be generated over the next 20 years.

In addition, DOE manages "run of the mill" hazardous waste with 69,000 cubic meters to be generated over the next 20 years. *Id.* at 11. (The weight of a cubic meter of waste depends on the density of the substance comprising the waste, e.g., a cubic meter of water weighs 1000 kilograms, or 2,200 pounds).

[382] *DOE Re-Figures Cleanup Cost at $227 Billion*, DEFENSE CLEANUP, July 26, 1996, *available in* 1996 WL 8377859

[383] Melinda R. Kassen, *The Inadequacies of Congressional Attempts to Legislate Federal Facility Compliance with Environmental Requirements,* 54 MD. L. REV. 1475, 1475 n.5 (1995). Citing an interim report of the Federal Facilities Environmental Dialogue Committee, and a 1993 report by Katherine Probst and Paul Portney, Kassen also states that the costs for both environmental clean-up and compliance

The legal barriers facing toxic tort victims that have so far been discussed are present regardless of who caused the injury. However, when a federal agency causes the injury, additional hurdles exist. When these additional hurdles are added to the legal barriers present in any toxic tort case, the chances of successful recovery are reduced even further. The hurdles that toxic tort victims face when seeking compensation from the federal government are both procedural and substantive.[384]

2) Sovereign Immunity

The starting point for analyzing toxic torts committed by the federal government is the concept of sovereign immunity. Sovereign immunity precludes suit against the government unless the government consents to the suit.[385] Although it is nowhere expressly stated in the U.S. Constitution, the Supreme Court has held that sovereign immunity is nevertheless implied by the Constitution, and therefore applies to the United States government.[386] For most of our nation's history, sovereign immunity barred all suits against the United States. As a result, the only recourse for persons injured by the activities of the federal government was either to file suit against individual government employees, or to seek relief through a Congressional private relief bill.[387] Neither was a

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at federal facilities dwarf environmental spending in the private sector. *But see* KATHERINE N. PROBST. ET. AL., FOOTING THE BILL FOR SUPERFUND CLEANUPS 18 (1995) (estimating the cost of cleaning up all current and future, non-federal sites on the National Priorities List at $462 billion).

[384] It should be kept in mind the procedural requirements and substantive restrictions discussed in this section are not limited to toxic torts, but apply to any tort claim against the United States.

[385] United States Dep't of Energy v. Ohio, 503 U.S. 607 (1992).

[386] *See* Principality of Monaco v. Mississippi, 292 U.S. 313 (1934).

[387] LESTER JAYSON, HANDLING FEDERAL TORT CLAIMS, § 51 (1977).

very attractive alternative. Individual employees usually had limited assets, and private relief bills were subject to political whim.

The United States waived absolute sovereign immunity with the enactment of the Federal Tort Claims Act in 1946.[388] The law was passed with two goals in mind. First, Congress wanted to provide a means of redress for persons injured by the federal government. Second. Congress wanted to relieve itself of the burden of the thousands of private relief bills it faced every session.[389] While Congress may have been successful in eliminating most of the private relief bills it has to consider, it is debatable whether the law actually provides a viable means of redress for persons injured by the federal government. As Justice Powell stated in his concurring opinion in the case of *Carlson v. Green*,[390] "The FTCA gives the plaintiff even less than he would receive under state law in many cases, because the statute is hedged with protections for the United States."[391]

The "hedges" to which Justice Powell referred are what make the FTCA a "limited" waiver of sovereign immunity. The limited nature of the FTCA's waiver is readily apparent upon examination of the many exclusions, exceptions and procedural requirements it contains. All of these hedges are strengthened by judicial interpretations concerning waivers of sovereign immunity in general. For example, it is well settled that

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[388] Originally enacted as Title IV of the Legislative Reorganization Act of 1946, 60 Stat. 842 (1946), (codified as amended at 28 U.S.C. § 1346(b), § 1402, and §§ 2671-2680 (1994)). Additional provisions of the U.S. Code that deal generally with the United States as a party to a lawsuit are at 28 U.S.C. §§ 2401-2416 (1994). Congress' authority for the act is Article I, Section 8 of the U.S. Constitution, which permits Congress to pay the debts of the United States. *See* United States v. Sherwood, 312 U.S. 584 (1941).

[389] In Part 3 of Title I of the Legislative Reorganization Act of 1946, Congress simultaneously enacted a law barring private relief bills when the claim was cognizable under the Federal Tort Claims Act. This bar is now codified at 2 U.S.C. § 190g (1994). In addition, Congress may refer private relief bills to the Court of Claims under 28 U.S.C § 2509. *See* Land v. United States, 37 Fed.Cl. 231 (1997) (claim involving alleged contamination from Rocky Mountain Arsenal not supported by evidence).

[390] 446 U.S. 14, 25 (1980) (Powell, J., concurring).

waivers of sovereign immunity must be unequivocal; any ambiguities on that point will be strictly construed in favor of the United States, and in favor of sovereign immunity.[392]

Thus, sovereign immunity is retained with respect to tort claims not specifically authorized by the FTCA. This obviously includes any torts that have been excepted or excluded from the terms of the act. These torts are, in effect, "exceptions to the exception." Since sovereign immunity has not been waived with respect to these torts, courts are without jurisdiction to hear cases based on them. The same is true for cases that have not followed the procedures specified by the FTCA. Even if a tort has been specifically authorized by the act, if the required procedures have not been followed, a court has no jurisdiction to hear the case. In short, toxic tort victims, like others who are injured by the federal government, can recover only to the extent the FTCA allows it, and only by following the act's rigid procedural requirements.[393]

It should also be kept in mind that states, as sovereigns, may also be immune from suit. If a state consents to suit, it may also impose conditions upon the maintenance of the suit. This is illustrated in *Ayers v. Township of Jackson*,[394] a case involving contamination of groundwater by a state-owned landfill. Under the New Jersey law, there could be recovery against the state only if the conduct of the state was "palpably unreasonable."[395] Furthermore, the same act prohibited damages for pain and suffering resulting from an

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[391] *Id.* at 29 & n. 2.

[392] United States Dep't of Energy v. Ohio, 503 U.S. 607 (1992).

[393] A toxic tort victim could seek recovery for injuries caused by some federal agencies under other statutes, such as the Military Claims Act, 10 U.S.C. § 2733 (1994), the Coast Guard Claims Act, 14 U.S.C. § 646 (1994), and under 42 U.S.C. § 2211 (1994) for incidents involving nuclear reactors of United States warships. One attractive aspect of these statutes from a claimant's perspective is that recovery is authorized even in the absence of any negligence on the part of the United States. Unfortunately for the claimant, however, there is no authority to file suit against the United States if the claim is denied.

[394] 525 A.2d 287 (N.J. 1987).

injury caused by the state unless the injury resulted in permanent loss of a bodily function, or permanent disfigurement or dismemberment where medical treatment expenses exceeded $1,000.[396] The various limitations that states have placed on toxic tort victims will not be discussed in the following sections. However, one should be aware that in tort actions against state entities, states may impose limitations similar to those imposed by the federal government under the FTCA.

### 3) Procedural Requirements of the FTCA

An injured party may not file suit against the United States unless he first presents his claim to the appropriate federal agency,[397] and then only after the claim is finally denied.[398] In order to force agencies to adjudicate claims in a timely fashion, the law provides claimants the option of considering the claim denied if the agency fails to take action within six months of the claim being filed.[399] The claim itself,

> . . . shall be deemed to have been presented when a Federal agency receives from a claimant, [or] his duly authorized agent or representative, an executed Standard Form 95 or other written notification of an incident, accompanied by a claim for money damages in a sum certain for injury to or loss of property, personal injury, or death alleged to have occurred by reason of the incident.[400]

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[395] *Id.* at 291.
[396] *Id.* at 294.
[397] 28 U.S.C. § 2675 (1994). *See* Gogburn v. United States, 717 F. Supp. 958 (D. Mass. 1989) (plaintiff's suit under the FTCA was dismissed because she filed an administrative claim with the wrong agency – the Veteran's Administration instead of the Navy).
[398] 28 U.S.C. § 2675(a) (1994). The purpose of this requirement is to facilitate settlement of meritorious claims. *See, e.g.,* Lopez v. United States, 758 F.2d 806, 809 (1st Cir. 1985).
[399] *Id.*
[400] 28 C.F.R. § 14.2(a) (1997).

In a subsequent suit, the amount claimed may not be increased, except where the increased amount is based upon newly discovered evidence not reasonably discoverable at the time of presenting the claim.[401]

A claim must be filed within two years after it accrues, and, if denied, suit must be filed within six months of the final denial.[402] The practical effect of this dual requirement is to turn what at first glance appears to be a two-year statute of limitations into a limitation that can bar suits in less than two years.[403] Furthermore, a claimant who has failed to file suit within six months of final denial may not file another claim after that denial (but within two years of accrual) in order to start the process all over again.[404] Finally, the statute of limitations under the FTCA applies even though state law may provide a longer statute of limitations.[405]

It is well settled that a claim under the FTCA accrues when the claimant knows or reasonably should have known of both the existence and the cause of his injury.[406] The claim accrues when the claimant knows of an injury, even if the full extent of the injury is

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[401] 28 U.S.C. § 2675(b) (1994).

[402] 28 U.S.C. § 2401(b) (1994) states:

> A tort claim against the United States shall be forever barred unless it is presented in writing to the appropriate Federal agency within two years after such claim accrues or unless action is begun within six months after the date of mailing, by certified or registered mail, of notice of final denial of the claim by the agency to which it was presented.

[403] Willis v. United States, 719 F.2d 608 (2nd Cir. 1983); Claremont Aircraft, Inc. v. United States, 420 F.2d 896 (9th Cir. 1970). Both cases involved claims that were filed within months of accrual. After the claims were denied, the plaintiffs filed suit – more than six months after the denials, but less than two years from the time the claims accrued. The claims were dismissed.

[404] Gonzalez-Bernal v. United States, 907 F.2d 246 (1st Cir. 1990); Willis v. United States. 719 F.2d 608 (2nd Cir. 1983).

[405] Benge v. United States, 17 F.3d 1286 (10th Cir. 1994); Magruder v. Smithsonian Inst., 758 F.2d 591 (11th Cir. 1985).

[406] United States v. Kubrick, 444 U.S. 111 (1979).

not discovered until much later.[407] Thus, if a claimant does not immediately file a claim, but waits and files one only after determining the injury is serious enough, his claim may be barred.[408]

Once a claim is denied, the claimant may bring suit. Suit may be filed only in the U.S. District Court where the claimant resides or wherein the act or omission complained of occurred.[409] Thus, state courts have no jurisdiction to hear claims under the FTCA. The suit must name the United States as defendant.[410] There is no entitlement to a jury trial under the act.[411] Equitable remedies are unavailable as claimants are limited to money damages only.[412] Prejudgment interest and punitive damages are specifically precluded.[413] Also noteworthy is the limitation on attorney's fees. A client may be charged no more than 20% of the amount recovered in administrative settlements, and 25% of the amount recovered after suit is filed.[414]

The procedural requirements noted above are pitfalls for the unwary and the uninitiated. For example, one unfamiliar with the maze of the federal bureaucracy may find it a challenge merely to determine the appropriate federal agency with which to

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[407] Industrial Constructors Corp. v. U.S. Bureau of Reclamation, 15 F.3d 963, 969 (10th Cir. 1994); Fries v. Chicago & Northwestern Transp. Co., 909 F.2d 1092, 1096 (7th Cir. 1990); Manko v. United States, 830 F.2d 831, 842 (8th Cir. 1987).

[408] *But see* Goodhand v. United States, 40 F.3d 209 (7th Cir. 1994) where the court employed a "trivial injury exception" finding the accrual of a claim could be tolled where upon first discovery an injury is too trivial to warrant further investigation.

[409] 28 U.S.C. § 1402(b) (1994).

[410] Even though the administrative claim that precedes the suit must be filed with the appropriate federal agency, the suit itself will be dismissed if that agency is named as the defendant. *See, e.g.*, Rivera v. United States, 928 F.2d 592 (2nd Cir. 1991), and Gilles v. United States, 906 F.2d 1386 (10th Cir. 1990).

[411] 28 U.S.C. § 2402 (1994).

[412] 28 U.S.C. §1346(b) (1994).

[413] 28 U.S.C. § 2674 (1994) states, "The United States shall be liable, respecting the provisions of this title relating to tort claims, in the same manner and to the same extent as a private individual under like circumstances, but shall not be liable for interest prior to the judgment or for punitive damages. *See* Molzof v. United States, 502 U.S. 301 (1992).

[414] 28 U.S.C. § 2678 (1994).

present a claim prior to suit. Since the procedural requirements of the FTCA are jurisdictional in nature, failure to comply with them deprives the court of jurisdiction to hear the case. Even when a claimant follows the specified procedures, his suit may be barred by the substantive limitations of the FTCA.

### 4) Substantive Limitations of the FTCA

Before discussing the substantive limitations contained within the FTCA itself, it is important to note that, in certain circumstances, millions of individuals are flatly barred from pursuing remedies based on its provisions. These individuals fall into two main categories; military personnel and federal civilian employees.[415] In the case of *Feres v. United States*,[416] the U.S. Supreme Court established the principle that the government can not be liable under the FTCA for injuries to servicemen arising out of, or in the course of, activity incident to military service. In reaching this determination the Court relied in part on the fact that compensation schemes administered by the Veterans Administration had been enacted by Congress to deal with service-connected injuries.[417]

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[415] In 1995, there were 2,943,000 federal employees and approximately 1,523,000 military personnel on active duty. U.S. DEP'T OF COMMERCE, STATISTICAL ABSTRACT OF THE UNITED STATES 346, 357 (1996).
[416] 340 U.S. 135 (1950). Since then, the Supreme Court has upheld the principle in Stencel Aero Eng'g Corp. v. United States, 431 U.S. 666 (1977), and United States v. Johnson, 481 U.S. 681 (1987).
[417] The Court stated, "This Court, in deciding claims for wrongs incident to service under the Tort Claims Act, cannot escape attributing some bearing upon it to enactments by Congress which provide systems of simple, certain, and uniform compensation for injuries or death of those in armed services." 340 U.S. at 144. Certainly, there are those who would take issue with Court's characterization of government compensation systems as "simple, certain, and uniform."

The "*Feres* doctrine" has barred toxic tort claims of servicemembers who were injured as a result of post-World War II testing of nuclear weapons.[418] In addition to barring claims based on the negligence that exposed them to the radiation, these cases barred claims based on post-discharge failure to warn of the dangers associated with their active-duty exposure.

However, *Feres* does not bar claims involving a breach of a duty that arises after discharge, if the post-discharge breach is independent of the alleged active-duty tort.[419] Thus, if the service member is injured by conduct that occurs after his discharge, *Feres* will not bar the claim. That was the holding in *Maas v. United States*,[420] where plaintiffs sued the United States under the FTCA, alleging health problems resulting from exposure to radioactive fragments during their participation in the cleanup of an airplane crash involving nuclear weapons. The court held that while *Feres* barred their claims based on exposure to dangerous radiation levels during the cleanup project, their aggravation of injury claims, based on post-discharge failure to warn, were not barred. Unfortunately for them, however, their claims were barred by the discretionary function exception[421] to the FTCA.

The same rationale that bars the claims of military personnel – the existence of a statutory compensation scheme – also bars the claims of federal civilian employees. The

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[418] Gaspard v. United States, 713 F.2d 1097 (5th Cir. 1983); Laswell v Brown, 683 F.2d 261 (8th Cir. 1982), *cert. denied*, 459 U.S. 1210 (1983); Lombard v. United States, 690 F.2d 215 (D.C. Cir. 1982), *cert. denied*, 462 U.S. 1118 (1983).

[419] *See* M.M.H. v United States, 966 F.2d 285 (7th Cir. 1992). In this case, the Army inaccurately tested the blood of a service member. After mistakenly informing her she was HIV positive, the Army discharged her. After the discharge, the Army discovered its mistake, but never notified the service member. The court held the service member could recover for the Army's post-discharge failure to inform her of the original misdiagnosis. *Id.* at 289.

[420] 897 F. Supp. 1098 (N.D. Ill. 1995).

[421] 28 U.S.C. § 2680(a) (1994). *See infra* text accompanying notes 438-475.

compensation scheme for federal employees is found in the Federal Employees' Compensation Act (FECA).[422] The law provides compensation for federal employees injured while in the performance of their duty, and has been likened to state worker's compensation programs.[423] Unlike the military members' FTCA bar which was judicially created by the *Feres* case, the bar on FTCA claims by federal employees for duty-related injuries is contained in the text of FECA.[424]

Since the claims of military members for injuries that are "incident to service," and the claims of federal employees for injuries sustained while "in the performance of their duty" are barred from consideration under the FTCA, there is a substantial body of law interpreting those phrases, the examination of which goes beyond the scope of this paper. Suffice to say, the FTCA is normally not an option for a military member or federal employee injured by the federal government.

Individuals who are not barred from bringing suit under the FTCA may bring an action against the United States for:

> . . . injury or loss of property, or personal injury or death caused by the negligent or wrongful act or omission of any employee of the Government while acting within the scope of his office or employment, under circumstances where the

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[422] 5 U.S.C. §§ 8101-8193 (1994).

[423] Gill v. United States, 641 F.2d 195, 197 (5th Cir. 1981).

[424] 5 U.S.C. § 8116(c) (1994) states:

> The liability of the United States or an instrumentality thereof under this subchapter or any extension thereof with respect to the injury or death of an employee is exclusive and instead of all other liability of the United States or the instrumentality to the employee, his legal representative, spouse, dependents, next of kin, and any other person otherwise entitled to recover damages from the United States or the instrumentality because of the injury or death in a direct judicial proceeding, in a civil action, or in admiralty, or by an administrative or judicial proceeding under a workmen's compensation statute or under a Federal tort liability statute. However, this subsection does not apply to a master or a member of a crew of a vessel.

> United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred.[425]

Under the FTCA, an injured party is limited to an action against the United States.[426] This limitation does not typically apply in common law tort actions involving employees acting within the scope of a master-servant relationship. In such cases, the injured party usually has the option of suing either the employee in his personal capacity or the employer.[427] If an FTCA suit is filed against an individual federal employee, the United States will be substituted as the defendant. Federal employees have immunity for common law torts committed within the scope of their employment.[428]

While the section of the FTCA set out above would appear to be an open-ended waiver of sovereign immunity, it must be read in conjunction with the many exceptions that are established in Section 2680 which provides:

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[425] 28 U.S.C. § 1346(b) (1994).

[426] The Federal Employees Liability Reform and Tort Compensation Act of 1988, Pub. L. 100-694, 102 Stat. 4563 (also known as the Westfall Act), added paragraph (b)(1) to 28 U.S.C. § 2679. It reads:

> The remedy against the United States provided by sections 1346(b) and 2672 of this title for injury or loss of property, or personal injury or death arising or resulting from the negligent or wrongful act or omission of any employee of the Government while acting within the scope of his office or employment is exclusive of any other civil action or proceeding for money damages by reason of the same subject matter against the employee whose act or omission gave rise to the claim or against the estate of such employee. Any other civil action or proceeding for money damages arising out of or relating to the same subject matter against the employee or the employee's estate is precluded without regard to when the act or omission occurred.

The immunity conferred by this section does not extend to claims based on a violation of a claimant's constitutional rights or a violation of a federal statute that authorizes suit against an individual. *See* 28 U.S.C. § 2679(b)(2) (1994).

[427] *See generally* Moon v. Price, 213 F.2d 794 (5th Cir. 1954). *See also* Westfall v. Erwin, 484 U.S. 292 (1988). *Westfall* held that federal employees were personally immune from suit only when their actions were within the scope of their employment and discretionary in nature. It was in response to this case that Congress enacted the Federal Employees Liability Reform and Tort Compensation Act of 1988, which conferred absolute immunity on federal employees for torts committed within the scope of their employment, except for torts based on a violation of a claimant's constitutional rights or a violation of a federal statute that authorizes suit against an individual.

The provisions of this chapter and section 1346(b) of this title shall not apply to
(a) Any claim based upon an act or omission of an employee of the Government, exercising due care, in the execution of a statute or regulation, whether or not such statute or regulation be valid, or based upon the exercise or performance or the failure to exercise or perform a discretionary function or duty on the part of a federal agency or an employee of the Government, whether or not the discretion involved be abused.
(b) Any claim arising out of the loss, miscarriage, or negligent transmission of letters or postal matter.
(c) Any claim arising in respect of the assessment or collection of any tax or customs duty, or the detention of any goods or merchandise by any officer of customs or excise or any other law-enforcement officer.
(d) Any claim for which a remedy is provided by sections 741-752, 781-790 of Title 46, relating to claims or suits in admiralty against the United States.
(e) Any claim arising out of an act or omission of any employee of the Government in administering the provisions of sections 1-31 of Title 50, Appendix.
(f) Any claim for damages caused by the imposition or establishment of a quarantine by the United States.
[(g) Repealed. Sept. 26, 1950, c. 1049, S 13(5), 64 Stat. 1043.]
(h) Any claim arising out of assault, battery, false imprisonment, false arrest, malicious prosecution, abuse of process, libel, slander, misrepresentation, deceit, or interference with contract rights: Provided, that, with regard to acts or omissions of investigative or law enforcement officers of the United States Government, the provisions of this chapter and section 1346(b) of this title shall apply to any claim arising, on or after the date of the enactment of this proviso, out of assault, battery, false imprisonment, false arrest, abuse of process, or malicious prosecution. For the purpose of this subsection, "investigative or law enforcement officer" means any officer of the United States who is empowered by law to execute searches, to seize evidence, or to make arrests for violations of Federal law.
(i) Any claim for damages caused by the fiscal operations of the Treasury or by the regulation of the monetary system.
(j) Any claim arising out of the combatant activities of the military or naval forces, or the Coast Guard, during time of war.
(k) Any claim arising in a foreign country.
(l) Any claim arising from the activities of the Tennessee Valley Authority.
(m) Any claim arising from the activities of the Panama Canal Company.
(n) Any claim arising from the activities of a Federal land bank, a Federal intermediate credit bank, or a bank for cooperatives.[429]

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[428] Barton v. American Red Cross, 829 F.Supp. 1290 (M.D. Ala.1993), *affirmed*, 43 F.3d 678 (11th Cir. 1994), *cert. denied*, 116 S.Ct. 84, (1995), *reh'g denied*, 116 S.Ct. 550 (1995).
[429] 28 U.S.C. § 2680 (1994).

The above section of the FTCA limits the causes of action that may be brought against the United States. Many of these exceptions are inapplicable in a typical toxic tort action, however, some may apply. For example, claims arising in a foreign country are clearly barred.[430] This exception has precluded numerous claims of medical malpractice allegedly committed overseas by military doctors against the family members of servicemen.[431] While there are no reported FTCA cases involving toxic torts allegedly arising overseas, the Supreme Court has left little doubt that such claims would be barred.[432] Likewise, claims arising out of battery, a theory that has been used in toxic tort cases,[433] are specifically barred.

It is important to recognize that section 1346(b) permits suits only for injury caused by the *negligent* or wrongful act or omission of a government employee. In the context of a toxic tort action, this section precludes claimants from recovery based on a theory of strict liability or absolute liability based upon an ultrahazardous activity,[434] two theories of recovery often used in toxic tort actions involving private parties. Furthermore, this section has been interpreted as prohibiting recovery based on a theory of express or implied warranty.[435]

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[430] 28 U.S.C. § 2680(k) (1994). However, an inhabitant of a foreign country may be able to recover under the Foreign Claims Act, 10 U.S.C. § 2734 (1994).
[431] Smith v. Marshall, 885 F.2d 650 (9th Cir. 1989); Powers v Schultz, 821 F.2d 295 (5th Cir. 1987); Heller v. United States, 776 F.2d 92 (3d Cir. 1985).
[432] Smith v. United States, 507 U.S. 197 (1993); United States v. Smith, 499 U.S. 160 (1991).
[433] *See, e.g.*, Werlein v. United States, 746 F. Supp. 887 (D. Minn. 1990) (plaintiff sued in battery for exposure to toxic waste), and Barth v. Firestone Tire and Rubber Co., 661 F. Supp. 193 (N.D. Cal. 1987) (plaintiff sued in battery for exposure to industrial toxins).
[434] Laird v. Nelms, 406 U.S. 797 (1972); Dalehite v. United States, 346 U.S. 15 (1952).
[435] Doe v. United States, 618 F. Supp. 503 (D.S.C. 1984). In this case the plaintiff alleged six causes of action against a military officer based on alleged sexual misconduct that occurred while plaintiff was receiving counseling. The causes of action were (1) breach of contract (2) breach of implied warranty (3)

Other theories of recovery typically used in toxic tort actions may be limited to the extent they do not involve negligence. In the case of *Western Greenhouses v. United States*,[436] plaintiffs alleged the waste disposal practices of a nearby Air Force base had contaminated their groundwater. They brought suit alleging nuisance and trespass, the two theories of recovery most often used in toxic torts. Under Texas law, neither trespass nor nuisance required proof of negligence. The court held it had no jurisdiction over the plaintiff's nuisance or trespass claims to the extent those claims would impose liability without negligence.[437]

Even when negligence is present, a plaintiff may be precluded from recovery based upon the broad reach of the "discretionary function" exception.[438] In what is perhaps the broadest exception to the FTCA's waiver of sovereign immunity, section 2680(a) of the act provides there can be no liability for, "any claim . . . based upon the exercise or performance or the failure to exercise or perform a discretionary function or duty on the part of a federal agency or an employee of the Government, whether or not the discretion involved be abused."[439]

The discretionary function exception to the FTCA exempts a broad range of governmental conduct from the scope of the act. The exception, "marks the boundary between Congress' willingness to impose tort liability upon the United States and its desire to protect certain governmental activities from exposure to suit by private

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assault and battery (4) intentional or reckless infliction of emotional distress (5) medical malpractice (negligence) and (6) outrageous conduct. While the court dismissed the complaint because it arose out of an assault and battery, and was therefore barred by 28 U.S.C. 2680(h), it specifically noted that there is no jurisdictional basis in the Federal Tort Claims Act for the assertion of claims against the United States based on breach of contract or breach of implied warranty.

[436] 878 F. Supp. 917 (N.D. Tex. 1995).

[437] *Id.* at 929.

[438] 28 U.S.C. § 2680(a) (1994).

individuals."[440] The purpose of the exception is to retain sovereign immunity for certain governmental functions, such as legislation and discretionary administrative action.[441]

A two-part test has been developed by the Supreme Court to determine whether the discretionary function exception applies in a given case.[442] First, the conduct in question must involve an element of choice. Second, the conduct must be the kind the discretionary function exception was designed to protect.[443] If both parts of the test are met, the conduct is discretionary and sovereign immunity is not waived.

The first part of the test is relatively straightforward. Generally, conduct will involve an element of choice unless a statute, regulation or policy prescribes a certain course of action for a government employee to follow. The second part of the test can be more troublesome as it requires a determination of whether the conduct was the kind the discretionary function exception was designed to protect. The Supreme Court has stated that governmental actions and decisions based on considerations of public policy are the type the exception is designed to protect. This prevents the second guessing of legislative and administrative decisions grounded in social, economic, and political policy through the medium of an action in tort.[444]

Application of the discretionary function exception in the context of a toxic tort case is illustrated in *Allen v. United States*.[445] The case involved over one thousand plaintiffs alleging some five-hundred deaths and injuries as a result of radioactive fallout

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[439] *Id.*
[440] United States v. Varig Airlines, 467 U.S. 797, 808 (1984).
[441] The legislative history of the discretionary function exception is analyzed by the U.S. Supreme Court in *Dalehite v. United States*, 346 U.S. 15 (1953).
[442] United States v. Gaubert, 499 U.S. 315 (1991); Berkovitz v. United States, 486 U.S. 531 (1988); United States v. Varig Airlines, 467 U.S. 797 (1984).
[443] Berkovitz v. United States, 486 U.S. 531 (1988).
[444] United States v. Varig Airlines, 467 U.S. 797, 814 (1984).

from open-air atomic bomb tests held in Nevada in the 1950s and 1960s. Citing the broad discretionary authority of the Atomic Energy Commission to conduct experiments in the military application of atomic energy under the Atomic Energy Act of 1954,[446] the Tenth Circuit Court of Appeals held that the discretionary function exception barred the plaintiffs' claims.

An interesting aspect of the discretionary function exception is that it bars suit against the United States even when discretion is exercised in a negligent manner. In *Allen*, the court stated:

> It is irrelevant to the discretion issue whether the AEC or its employees were negligent in failing to adequately protect the public. (citations omitted) When the conduct at issue involves the exercise of discretion by a government agency or employee, § 2680(a) preserves governmental immunity whether or not the discretion involved be abused. For better or worse, plaintiffs here obtain their right to sue from Congress and necessarily must take it subject to such restrictions as have been imposed.[447]

Other circuits have routinely barred toxic tort actions based upon the discretionary function exception.[448]

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[445] 816 F.2d 1417 (10th Cir. 1987).
[446] 42 U.S.C. §§ 2011-2297 (1994).
[447] 816 F.2d at 1421, 1422.
[448] Smith v. Johns-Manville Corp., 795 F.2d 301 (3d Cir. 1986) (involving a General Service Administration decision to sell asbestos without warning of hazards); Merklin v. United States, 788 F.2d 172 (3d Cir. 1986) (involving Atomic Energy Commission inspectors' failure to warn uranium processing plant employees of health hazards discovered during inspections); Begay v. United States, 768 F.2d 1059 (9th Cir. 1985) (involving U.S. Public Health Service's failure to warn uranium miners of radiation hazards); Cisco v. United States, 768 F.2d 788 (7th Cir. 1985) (involving Environmental Protection Agency failure to warn residents of landfill dirt contaminated with dioxin); Shuman v. United States, 765 F.2d 283 (1st Cir. 1985) (involving Navy failure to warn shipyard workers of asbestos hazards); Hylin v. United States, 755 F.2d 551 (7th Cir. 1985) (involving federal mine inspectors' failure to fully inspect clay mine); General Public Utilities Corp. v. United States, 745 F.2d 239 (3d Cir. 1984) (involving Nuclear Regulatory Commission's failure to warn of possible equipment defects at the Three Mile Island nuclear facility), *cert. denied*, 469 U.S. 1228 (1985).

After Allen was decided, the Supreme Court decided the case of *Berkovitz v. United States*,[449] where the Court refined the first part of the discretionary function test, specifically addressing the question of when conduct involves an element of choice. The Court made it clear that there is no element of choice, and the discretionary function exception will not apply, when a federal statute, regulation, or policy prescribes a course of action for an employee to follow.[450] After *Berkovitz*, the viability of the discretionary function exception has in large part depended on whether mandatory directives exist which remove the element of choice from the government's action.

A growing number of toxic tort cases dealing with the discretionary function exception have wrestled with the issue of whether specific, mandatory directives apply to the waste disposal and waste cleanup activities of federal agencies. One such case, *Daigle v. Shell Oil Company*,[451] involved the Rocky Mountain Arsenal in Colorado, a twenty-seven square mile Army facility with over a hundred contamination sites containing huge quantities of liquid and solid wastes. The Army's cleanup efforts were taken under authority granted by the Comprehensive Environmental Restoration, Compensation and Liability Act[452] and Executive Order No. 12580.[453] During the cleanup of one of the sites, noxious odors and airborne pollutants escaped and blew over plaintiff's residences.

Plaintiffs asserted claims against the Army under the FTCA, based on negligence, nuisance, trespass, strict liability for an ultrahazardous activity, and intentional and

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[449] 486 U.S. 531 (1988).
[450] *Id.* at 536. The Court subsequently applied the *Berkovitz* test in the case of *United States v. Gaubert*, 499 U.S. 315 (1991).
[451] 972 F.2d 1527 (10th Cir. 1992).
[452] 42 U.S.C. §§ 9601-9675 (1994). §9604(a) gives the President the authority to respond to the release or threatened release of hazardous substances, and to take any actions consistent with the National Contingency Plan to remove those substances.

negligent infliction of emotional distress. The district court dismissed these claims against the Army, holding that the discretionary function applied to the means the Army employed in its cleanup efforts. On appeal, the Tenth Circuit Court of Appeals employed the two-part *Berkovitz* test to determine whether the discretionary function exception applied. First, the court addressed the question of whether the Army's action involved the element of choice. The court explained that in addressing this question, the focus was not on whether or not negligence existed, but on whether mandatory directives removed the element of choice:

> Harsh as it may be, whether the Army substantially endangered Plaintiff's health and welfare is irrelevant to the discretionary function determination. The question is not whether the Army fell short in its efforts to attain the general health and safety goals of the CERCLA, but whether the Army's shortcomings violated specific mandatory directives.[454]

The Court of Appeals found that specific, mandatory directives were not involved. Having found the Army's actions involved the element of choice, the court went on to find that the Army's actions involved policy choices of the most basic kind. That being the case, the Army's action was the type the discretionary function exception was designed to protect, and the exception applied.

Clearly then, a toxic tort plaintiff's ability to avoid having his case dismissed based on the discretionary function exception depends in large part on the existence of specific, mandatory requirements that the government must follow. Where specific, mandatory

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[453] 52 Fed. Reg. 2923 (1987). This order delegates the President's authority to respond under 42 U.S.C. § 9604(a) to the Secretary of Defense for releases or threatened releases on military installations.
[454] 972 F.2d at 1540.

directives govern a federal employee's action, the discretionary function does not apply.[455] The holdings in several cases illustrate where these specific, mandatory directives may be found. In *Starrett v. United States*,[456] landowners alleged the Navy had contaminated their well water, when wastewater from a process that removed explosives from missiles leached into the ground. While the Navy argued that there were no specific, mandatory requirements governing waste disposal for the process they were using, the Ninth Circuit Court of Appeals found that Executive Order 11258[457] constituted a specific direction concerning waste disposal. Therefore, the discretionary function could not apply.

Executive Order 11258 has since been superseded by Executive Orders 11507,[458] 11752,[459] and most recently 12088.[460] Unlike its predecessors, which dealt solely with water pollution control, Executive Order 12088 deals with pollution control standards in general. It does not establish specific, mandatory processes, however. The brief, three-page order states that federal agencies must comply with the applicable pollution control standards of a number of federal environmental laws.[461] Whenever a federal agency is in

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[455] Collins v. United States, 783 F.2d 1225 (5th Cir. 1986).
[456] 847 F.2d 539 (9th Cir. 1988).
[457] 30 Fed. Reg. 14483 (1965). The order, entitled "Prevention, Control, and Abatement of Water Pollution by Federal Facilities," contained a number of specific directives aimed at water pollution control. Among other things, the order mandated "secondary treatment" of waste water, as that term is used in the Clean Water Act at 33 U.S.C. §1311.
[458] 35 Fed. Reg. 2573 (1970).
[459] 38 Fed. Reg. 34793 (1973).
[460] 43 Fed. Reg. 47707 (1978).
[461] Paragraph 1-102 of the order states:

> The head of each executive agency is responsible for compliance with applicable pollution control standards, including those established pursuant to, but not limited to, the following:
> (a) Toxic Substances Control Act (15 U.S.C. 2601 et seq.).
> (b) Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq.).
> (c) Public Health Service Act, as amended by the Safe Drinking Water Act (42 U.S.C. 300f et seq.).
> (d) Clean Air Act, as amended (42 U.S.C. 7401 et seq.).
> (e) Noise Control Act of 1972 (42 U.S.C. 4901 et seq.).
> (f) Solid Waste Disposal Act, as amended (42 U.S.C. 6901 et seq.).

violation of an applicable pollution control standard, the agency must develop a plan to achieve and maintain compliance. Thus, instead of establishing specific, mandatory directives, the order merely states that federal agencies are responsible for compliance with environmental laws. That may have been a novel concept in 1978 when President Carter signed Executive Order 12088, however, given the waivers of sovereign immunity that are contained in most environmental laws today,[462] 12088 does not place significant additional burdens on federal agencies. There are no reported cases that have specifically addressed the issue of whether or not Executive Order 12088 establishes mandatory duties in the context of the discretionary function exception to the FTCA.[463]

In addition to Executive Orders, other agency materials may establish mandatory requirements that an agency must follow, thus removing the element of discretion from the agency's action. In *Clark v. United States*,[464] the plaintiff's well water was contaminated by trichloroethylene (TCE) that had leached into the groundwater from burn pits located on a nearby Air Force Base. The court found that, in general terms, the siting of a

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> (g) Radiation guidance pursuant to Section 274(h) of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2021(h); see also, the Radiation Protection Guidance to Federal Agencies for Diagnostic X Rays approved by the President on January 26, 1978 and published at page 4377 of the federal register on February 1, 1978).
> (h) Marine Protection, Research, and Sanctuaries Act of 1972, as amended (33 U.S.C. 1401, 1402, 1411-1421, 1441-1444 and 16 U.S.C. 1431-1434).
> (i) Federal Insecticide, Fungicide, and Rodenticide Act, as amended (7 U.S.C. 136 et seq.).

[462] *See, e.g.*, 42 U.S.C. § 6961 (1994), where the Solid Waste Disposal Act was amended by the Federal Facilities Compliance Act, Pub. L. 102-386, 106 Stat. 1505 (1992). The act requires federal facilities to comply with all federal, state, interstate, and local requirements concerning solid and hazardous waste.

[463] In this respect it is important to note that Executive Order 12580, 52 Fed. Reg. 2923 (1987), amended Executive Order 12088 as follows:

> Executive Order No. 12088 of October 13, 1978, is amended by renumbering the current Section 1-802 as Section 1-803 and inserting the following new Section 1-802: "1-802. Nothing in this Order shall create any right or benefit, substantive or procedural, enforceable at law by a party against the United States, its agencies, its officers, or any person."

Whether or not this amendment will have any effect on the question of whether or not E.O. 12088 establishes specific, mandatory duties remains to be seen.

[464] 660 F. Supp. 1164 (W.D. Wash. 1987).

garbage dump is a discretionary function.[465] However, Air Force manuals required the presence of groundwater and the possible effects on groundwater be considered in burn pit siting decisions. The court found this was a positive, regulatory requirement, and the Air Force's failure to perform this duty was not protected by the discretionary function.[466]

Another case that dealt with Air Force regulations was *Kirchmann v. United States.*[467] In *Kirchmann,* the plaintiff alleged that TCE used by an Air Force contractor in the construction of a missile silo contaminated the local groundwater. The plaintiff cited numerous Air Force regulations dealing with the disposal of hazardous substances. However, these regulations dealt only with how the Air Force was required to handle hazardous substances – they did not apply to government contractors. Further, the regulations cited by the plaintiff did not deal with how the Air Force was to supervise contractors or that the Air Force should ensure that the contractor lawfully disposed of hazardous waste. The court found that the Air Force's decisions concerning supervision of the contractor, even if negligent were protected by the discretionary function.[468]

On the other hand, agency materials that require specific actions may be incorporated into the contracts the agency enters into. The case of *Woodman v. United States*[469] presents an interesting example. In this case, the Navy placed hazardous waste in dumpsters that was subsequently removed from the base by a contractor. After disposal, the waste eventually leached from a landfill. When the waste disposal company was sued,

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[465] *Id.* at 1189.
[466] *Id.*
[467] 8 F.3d 1273 (8th Cir. 1993).
[468] The court stated, "Where no statute or regulation controls the government's monitoring of a contractor's work, the extent of monitoring required or actually accomplished is necessarily a question of judgment, or discretion, for the government." *Id.* at 1276.
[469] 764 F. Supp. 1455 (M.D. Fla. 1991).

the company cross-claimed against the Navy. The court stated, "the Navy had a mandatory duty to ensure that unauthorized materials were not placed in the dumpsters by segregating the waste. While this duty was not explicitly stated in the waste disposal contracts, the court finds that it was implicit in the contracts."[470]

If there are no specific, mandatory directives, the second part of the test comes into play. The discretionary function exception shields the United States from liability in the absence of specific, mandatory directives only if the function was the type the exception was designed to protect. Unfortunately for toxic tort victims, it has often been held that decisions of federal agencies concerning waste disposal are those types of decisions. In *Bowman v. United States*,[471] the court held that the Navy's decision to bury pyridine in a landfill, and its failure to warn of actual or suspected hazards of the substance, was protected under the discretionary function exception. Other courts have employed similar reasoning.[472]

On the other hand, at least one case has held that agency decisions concerning waste disposal are not the kind the discretionary function exception was designed to protect. In *Redland Soccer v. United States Army*,[473] the court found the Army's decision concerning location and management of a toxic landfill was not subject to the discretionary function exception since it did not further the Army's legislative mandate.[474] This approach has been criticized since it requires courts to determine the scope of an

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[470] *Id.* at 1465. If specific, mandatory requirements can arise from "implied" duties, there is no discernible limit to where these requirements might be found.
[471] 848 F. Supp. 979 (M.D. Fla. 1994).
[472] Aragon v. United States 950 F. Supp. 321 (D.N.M. 1996); Western Greenhouses v. United States, 878 F. Supp. 917 (N.D. Tex. 1995); Kirchmann v. United States, 8 F.3d 1273 (8th Cir. 1993); Smalls v. United States, 683 F. Supp. 120 (E.D. Pa. 1988).
[473] 835 F. Supp. 803 (M.D. Pa. 1993), *aff'd in relevant part*, 55 F.3d 827 (3rd Cir. 1995), *cert. denied*, 116 S.Ct. 772 (1996).

agency's mission in order to determine whether the activity in question was in furtherance of that mission.[475]

Under the FTCA, a toxic tort plaintiff's ability to recover from the United States is severely limited by the discretionary function exception. As will be seen, not only does this exception protect the United States from liability, an extension of the concept protects those who do the government's bidding.

5) Government Contractors

Much of the work of the federal government is done by private contractors.[476] Not only do federal agencies use contractors to accomplish their missions, they also use them extensively to accomplish their environmental cleanup efforts. Those who are injured by the actions of these contractors will, in most cases, be unable to recover from the United States, and may be unable to recover from the contractors themselves.

The liability of the United States for the actions of its contractors is limited by general principles of agency law, and the specific terms of the FTCA. Generally, a principle is liable for the acts of its employees and agents, but not for the acts of independent contractors.[477] That being the case, the United States would not be liable for the torts of its contractors under common law.

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[474] *Id.* at 808.
[475] *See* Western Greenhouses v. United States, 878 F. Supp. 917, 928 (N.D. Tex. 1995).
[476] "Billions of dollars of federal money are spent each year on projects performed by people and institutions which contract with the Government." United States v. Orleans, 425 U.S. 807, 815 (1972).
[477] HAROLD GILL REUSCHLEIN & WILLIAM A. GREGORY, HANDBOOK ON THE LAW OF AGENCY AND PARTNERSHIP 100 (1979). The contractor's inability to bind the government and the government's inability to control the methods of the contractor are the two principle reasons why there is no liability in such cases. "The independent contractor is not an agent since his function includes no power to represent

Rather than rely on common law principles, however, and the differing degree of protection those principles would afford the United States under various state laws,[478] Congress specifically excluded government contractors from the definition of federal agency under the FTCA.[479] Thus, the federal government cannot be held liable for the actions of its contractors.[480]

It would seem clear then, that the United States has not waived sovereign immunity for the acts of its independent contractors. However, the Court of Appeals for the Eleventh Circuit has held that federal agencies may be liable for the negligence of their contractors when certain duties are nondelegable under state law. In *Dickerson v. United States*,[481] an agency within the DOD contracted with private companies for the disposal of polychlorinated biphenyls (PCBs) that had been removed from military bases around the country. The court held that while the discretionary function applied to the decision to award the contracts, Florida law imposed a nondelegable duty to ensure safe performance of the contract since it involved an inherently dangerous activity.[482]

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the principal contractually and he does not satisfy the definition of a servant because the constituent lacks the right to control him in the doing of a job." United Engineers and Constructors, Inc. v. Branham, 550 S.W.2d 540 (Ky. 1977).

[478] State law is applied under the FTCA. 28 U.S.C. § 1346(b) waives sovereign immunity to the extent the federal government, "would be liable to the claimant in accordance with the law of the place where the act or omission occurred."

[479] 28 U.S.C. § 2671 (1994) reads as follows:

> As used in this chapter and sections 1346(b) and 2401(b) of this title, the term "Federal agency" includes the executive departments, the judicial and legislative branches, the military departments, independent establishments of the United States, and corporations primarily acting as instrumentalities or agencies of the United States, but does not include any contractor with the United States.

[480] Logue v. United States, 412 U.S. 521, 527 (1973); Gibson v. United States, 567 F.2d 1237 (3d Cir. 1977). Nevertheless, the federal government can be held liable for negligence associated with an independent contractor. In *Aretz v. United States*, 604 F.2d 417 (5th Cir. 1979), the Army was held liable under the FTCA for negligently failing to communicate information to an independent contractor.

[481] 875 F.2d 1577 (11th Cir. 1989).

[482] *Id.* at 1580.

Other circuits have not followed *Dickerson*.[483] The analysis employed in *Reynolds v. Southern Management, Inc.*[484] expresses what seems to be the majority view. In that case, a contractor was hired to remove and dispose of wash water that had been contaminated by the cleaning of underground storage tanks. As in the *Dickerson* case, the plaintiff alleged that state law imposed a nondelegable duty on the U.S. to ensure that the wash water was disposed of safely. In weighing the state law duty versus the clear language of the FTCA, the court stated:

> While the Federal Tort Claims Act leaves the Court free to look to the state law of torts and agency to define "contractor;" it does not leave the Court free to abrogate the FTCA's independent contractor exemption through application of such state law exceptions. (citations omitted) The Supreme Court has made it clear that the determination of whose negligence the Government should be liable for is governed by the Federal Tort Claims Act, including its independent contractor exemption, and not by state law.[485]

In most cases then, a toxic tort victim will be precluded from bringing an action against the United States for the acts of its contractors. In addition, actions against the contractors themselves may also be precluded. In the case of *United States. v. Boyle*,[486] the Supreme Court established the government contractor defense. The government

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[483] Berkman v. United States, 957 F.2d 108 (4th Cir 1992); Duff v. United States, 999 F.2d 1280 (8th Cir. 1993).
[484] 856 F. Supp. 618 (W.D. Ok. 1994).
[485] *Id.* at 621.
[486] 487 U.S. 500 (1988).

contractor defense extends the shield of the discretionary function exception to contractors.[487]

With the *Boyle* case, the Supreme Court established a defense that has far-reaching potential to shield government contractors from tort liability. The case established that liability for design defects in military equipment could not be imposed pursuant to state law when (1) the United States approved reasonably precise specifications; (2) the equipment conformed to those specifications; and (3) the supplier warned the United States about the dangers in the use of the equipment that were known to the supplier but not to the United States.[488]

Although *Boyle* dealt with liability based on a defect in military equipment supplied by a military contractor, courts have since held that the government contractor defense applies to all contractors, not just military contractors, and to performance contracts, not just procurement contracts.[489] Thus, the defense can be extended to toxic torts arising from an environmental cleanup.[490] However, other courts have held the government contractor defense applies only to military products.[491] Interestingly, the Supreme Court recently affirmed that the chemical manufacturers of the defoliant "agent orange" could not recover from the United States for the costs of defending and settling litigation associated with that product, in part because the manufacturers could have availed

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[487] Prior to the *Boyle* case, the Court of Appeals for the Fourth Circuit had held that displacement of state law that would hold government contractors liable for design defects in military equipment was required by the principle of the "*Feres*" doctrine, under which the FTCA does not cover injuries to military personnel in the course of military service. Rather than adopt that reasoning, the Supreme Court in *Boyle* discussed the discretionary function exception and stated, "We think that the selection of the appropriate design for military equipment to be used by our Armed Forces is assuredly a discretionary function within the meaning of this provision." *Id.* at 511.

[488] *Id.* at 512.

[489] Carley v. Wheeled Coach, 991 F.2d 1117 (3d Cir. 1993).

[490] Richland-Lexington Airport Dist. v. Atlas Properties Inc., 854 F. Supp 400 (D.S.C. 1994).

themselves of the government contractor defense had they chosen not to settle the case and gone to trial.[492]

Obviously, the FTCA is a limited waiver of sovereign immunity. The waiver is limited by the many exceptions and exclusions the act contains. Because the waiver is limited, the United States retains sovereign immunity with respect to many of the torts it commits, including many toxic torts. Even when a claim is cognizable under the FTCA, claimants must comply with burdensome procedural requirements they would not face if injured by someone other than the federal government.

Toxic tort victims already face a number of legal barriers to recovery based on the nature of their cases, regardless of who caused them harm. The FTCA imposes additional barriers when the harm is caused by the United States. Since the FTCA permits recovery only where government negligence is present, theories of recovery that are often used in toxic tort actions against private parties are unavailable. Even when negligence is present, the discretionary function exception may preclude the suit. As a result of the discretionary function exception, numerous toxic tort suits arising from environmental cleanups have been dismissed. The exclusion not only shields federal agencies from liability under the FTCA, but in certain circumstances, may also shield government contractors under the guise of the government contractor defense. In sum, the additional legal barriers toxic tort victims face under the FTCA, greatly limits, and in some cases even eliminates, their ability to recover for their injuries.

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[491] *See, e.g., In re* Hawaii Federal Asbestos Cases, 960 F.2d 806 (9th Cir.1992).
[492] Hercules v. United States, 116 S.Ct. 981 (1995).

## VII. Alternative Compensation Schemes in General

The inadequacy of common law tort recovery when it comes to compensating injured persons is not a new phenomena. In the past, it has been recognized as inadequate under many different circumstances. Once recognized as inadequate, common law tort recovery is often statutorily replaced with an alternative compensation scheme. Such schemes focus on particular individuals, particular types of injuries, or both. They often represent a compromise between those who are injured and potential defendants. Injured parties give up the ability to assert individual causes of action that reflect their specific concerns. In exchange for giving up their "day in court" (which might result in a windfall if punitive damages are authorized), they receive a fairly certain, modest recovery. Defendants relinquish the traditional requirement that injured persons prove the defendant was at fault, as well as any defenses they might assert, in exchange for a certain and manageable limit on their liability. Many of these schemes developed because injured persons faced many of the same problems that toxic tort victims currently face.

Workers' Compensation is perhaps the most well-known alternative compensation scheme:

> Workers' compensation was aimed at offering a compromise to both employers and employees as a means of avoiding the perceived failures of tort law. No-fault liability and abrogation of the common-law defenses of contributory negligence, assumption of the risk, and the fellow-servant rule benefited the employee, as did an overall speedier resolution of the claim than occurs in the civil litigation process. The employer benefited from a reduction in overall accident costs by receiving both statutory limitations on employee recovery as well as immunity from tort liability. A related but broader social aim of workers' compensation was

> industrial safety. Employers faced with the high expense of multiple compensation claims presumably would elect to invest in workplace safety measures rather than continue to risk the financial uncertainty and unprofitability of industrial accidents.[493]

Workers' compensation schemes have been successful in relieving employees injured in the course of their employment of the burdens of the common law tort system. Every state has some version of a workers' compensation system. While these systems are far from perfect,[494] few would advocate a return to a system where employees had to utilize common law tort recovery to receive compensation for their injuries.

As has already been mentioned, military members and federal employees have a sort of "federal workers' compensation" scheme that compensates them for injuries received "incident to service," and "in the performance of their duty," respectively.[495] In the *Feres* case, the Supreme Court noted the existence of the statutory compensation scheme for military members as part of its justification in holding that military members could not avail themselves of the Federal Tort Claims Act. According to the Court, Congress did not expect military members to have to resort to tort recovery for compensation. In discussing the option of tort recovery the Court noted, "A soldier is at peculiar disadvantage in litigation. Lack of time and money, the difficulty if not

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[493] Jean Macchiaroli Eggan, *Toxic Reproductive and Genetic Hazards in the Workplace: Challenging the Myths of the Tort and Workers' Compensation Systems*, 60 FORDHAM L. REV. 843, 860 (1992).

[494] Workers' compensation responds well to injuries caused by accidents. However, as currently designed, it does not respond well to occupational diseases caused by toxic exposure. *See id.*

[495] *See supra* text accompanying notes 415-424. Both schemes provide for payments for injuries or death to either the injured party or eligible beneficiaries.

impossibility of procuring witnesses, are only a few of the factors working to his disadvantage."[496] Arguably, many toxic tort victims face similar disadvantages.

In addition to providing compensation for particular individuals, legislative compensation schemes have focused on particular types of injuries. In 1957, Congress passed the Atomic Energy Damages Act, also known as the Price-Anderson Act.[497] The primary purpose of the act was to encourage investment in nuclear energy by placing limits on total liability for a nuclear accident.[498] However, the act also established a compensation scheme for those injured by a nuclear incident. The scheme is financed through mandatory contributions to a fund and private insurance.

The Price-Anderson Act creates strict liability for those who hold federal nuclear licenses and eliminates the defense of contributory negligence.[499] However, claimants retain the burden of establishing causation and proof of damages.[500] All claims involving a nuclear incident are consolidated in the federal court in the district where the incident occurred.[501]

In 1990, Congress amended the Price-Anderson Act with the Radiation Exposure Compensation Act.[502] The new act established a fund of $100 million for individuals harmed by the government's above-ground nuclear testing. Under the act, individuals are

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[496] Feres v. United States, 340 U.S. at 145 (1950).
[497] Pub. L. No 85-256, 71 Stat. 576 (1957).
[498] *Id.*
[499] 42 U.S.C. § 2210(n) (1994).
[500] 10 C.F.R. 140.81(b)(4) (1997).
[501] 42 U.S.C. § 2210(n) (1994).
[502] Pub.L. No. 101-426, 104 Stat. 920 (1990).

entitled to $50,000 if they can show that they were physically present in parts of Utah, Nevada, or Arizona during specified periods and submit medical documentation proving that they contracted specified radiation-related diseases.[503]

Another federal compensation scheme aimed at a specific type of injury was established by the National Childhood Vaccine Injury Act of 1986.[504] Like the Price-Anderson Act, the Vaccine Act was aimed at limiting liability so that manufacturers would continue to engage in an activity that Congress felt was in the public interest. The compensation scheme is financed by a tax on each dose of a given vaccine. Plaintiffs can recover for injuries listed on the Vaccine Injury Table provided the injury occurs within a given exposure period.[505]

Clearly, Congress' goal in enacting the compensation schemes contained in the Vaccine Act and the Radiation Act was not solely to compensate victims. In large part, these laws were passed because potentially unlimited liability was threatening to strangle a particular industry. When industry cannot accurately gauge the risk of liability, it isn't possible to insure against the risk.[506] Most responsible corporations will not engage in an activity under those circumstances.

Thus, a federal compensation scheme for toxic tort victims may come about only when Congress perceives a need to protect a desirable industry that is involved with toxic substances. Congress has already acted to limit the potential liability of "response action

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[503] *Id.* at § 4, 104 Stat. 921.
[504] Pub. L. No. 99-660, 100 Stat. 3755 (codified as amended at 42 U.S.C. §§ 300aa-10 to 300aa-33 (1994 & Supp. I 1995)).
[505] 42 U.S.C. § 300aa-14(c) (1994 & Supp. I 1995). Revisions to the Vaccine Injury Table are published at 42 C.F.R. 100.3 (1997).
[506] Robert Berger, *The Impact of Tort Law Development on Insurance: The Availability/Affordability Crises and its Potential Solutions*, 37 AM. U. L. REV. 285 (1988) (arguing that uncertainty in tort law,

contractors," those who engage in cleanup of hazardous waste sites, in order to encourage this activity.[507] As our society continues to pile up toxic waste without a clear idea of how to dispose of it, a compensation scheme for injured persons may be the next step, especially if industry refuses to get involved based on concerns over liability.

Other federal statutory compensation schemes exist that address other specific individuals and injuries.[508] All of these schemes modify traditional common law methods of compensating injured persons in order to further socially desirable goals. Such a scheme was recommended by the "Superfund 301(e) Study Group"[509] for victims of toxic contamination, yet one has never been adopted. Interestingly, in the absence of statutory compensation schemes, the remedies that courts are fashioning, particularly in cases of mass exposure to toxic substances, resemble legislative creations. This trend was first recognized with regard to the asbestos cases:

> The lack of an alternative compensation mechanism has forced the courts to improvise. Faced with impossible demands on their resources, the courts have increasingly required defendants in asbestos cases to compensate plaintiffs without regard to established principles of tort liability. Seeking only to compensate asbestos victims and ignoring the other public policies which underlie tort law, the courts are turning the tort system into a bastardized, quasi compensation system.[510]

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caused in part by mass litigation involving latent diseases, leads to an inability to obtain liability insurance).

[507] Comprehensive Environmental Response, Compensation and Liability Act § 119, 42 U.S.C. § 9619 (1994 & Supp. I 1995).

[508] *See, e.g.*, Black Lung Benefit Provisions at 30 U.S.C. §§ 901-945. They provide tax-funded compensation, coordinated with state workers' compensation benefits, to coal miners suffering from pneumoconiosis, better known as black lung disease. Funding for these benefits comes from an excise tax on coal mined and produced in the United States. Payments vary with length of employment as a coal miner and with the date of filing of the disability claim.

[509] *See supra* notes 94 & 95 and accompanying text.

[510] Victor Schwartz & Thomas Means, *The Need for Federal Product Liability and Toxic Tort Legislation: A Current Assessment*, 28 VILL. L. REV. 1088, 1110 (1982-83).

Other settlements that have accompanied mass toxic tort cases have drawn similar criticism. The Manville trust and its resemblance to a compensation scheme has already been discussed.[511] The Agent Orange settlement[512] allegedly compromised every goal of the tort system.[513] In approving the settlement, the court noted the uncertainty as to whether the plaintiffs' injuries were actually caused by Agent Orange, but appeared to apply a "proportionate liability rule" which did not require particularistic proof of causation. However, traditional tort rules were applied to those who opted out of the class.[514] Thus, a relaxed standard, similar to those used in alternative compensation schemes was applied to plaintiffs who were part of the class action, while a more stringent causation standard was applied to everyone else.

The most recent evidence of a "judicial compensation scheme" that more or less ignores traditional tort law is the silicone breast implant settlement. On September 1, 1994, the U.S. District Court for the Northern District of Alabama approved a settlement of $4.25 billion between manufacturers of silicone breast implants and approximately 444,000 women – the largest class action settlement in the history of the United States.[515] At the time of the settlement, a great deal of uncertainty existed concerning whether or not silicone breast implants actually caused any of the connective tissue diseases suffered by the plaintiffs. Since that time, "published medical opinions have failed to find any

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[511] *See supra* notes 303-312 and accompanying text.
[512] *In re* Agent Orange Prod. Liab. Litig., 597 F. Supp. 740 (E.D.N.Y. 1984), *aff'd*, 818 F.2d 145 (2nd Cir. 1987).
[513] Robert L. Rabin, *Some Thoughts on the Efficacy of a Mass Toxics Administrative Compensation Scheme*, 52 MD. L. REV. 951, 952 (1993).
[514] Edward J. Schwatrzbauer & Sidney Shindell, *Cancer and the Adjudicative Process: The Interface of Environmental Protection and Tort Law*, 14 AM J.L. & MED. 1, 29-37 (1988) (alleging that traditional rules concerning causation were applied to cases brought by those who opted out of the Agent Orange class action suit).
[515] Lindsey v. Dow Corning Corp., No. CV 92-P-100000-S, 1994 WL 578353, (N.D. Ala. 1994).

correlation between silicone breast implants and any of the connective tissue diseases alleged."[516] It is ironic that with all the legal barriers that face toxic tort victims, two of the most famous toxic tort settlements, those involving Agent Orange and silicone breast implants, were reached in virtual absence of proof that those substances caused any injury. The courts that approved these settlements did not apply traditional common law rules because they recognized that common law tort recovery was inadequate.

## VIII. The Oil Pollution Act

With the Oil Pollution Act of 1990,[517] Congress has taken a step toward establishing a federal compensation scheme for victims of toxic exposure. For the first time, we see such a scheme in the context of a regulatory environmental law. The act contains the basic features of most traditional compensation schemes. In exchange for limiting the liability of potential defendants, it facilitates compensation for injured parties. It facilitates compensation by establishing a federal cause of action for private parties injured by oil spills, and by allowing injured parties to make claims against a federal fund should their private cause of action fail. Despite some significant shortcomings, which will be noted, the act may serve as a model for future compensation schemes for victims of toxic exposure.[518]

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[516] Krista R. Stine, *Silicone, Science and Settlements: Breast Implants and a Search for the Truth*, 63 DEF. COUNS. J. 491, 492 (1996).

[517] Pub. L. 101-380, 104 Stat. 486 (codified as amended at 33 U.S.C. §§ 2701-2761 (1994 & Supp. I 1995)).

[518] In describing the law that existed prior to Oil Pollution Act, Senate Report No. 94 cited many of the inadequacies of common law tort recovery when it stated:

> [T]here is a fragmented collection of Federal and State laws providing inadequate cleanup and damage remedies, taxpayer subsidies to cover cleanup costs, third party damages that go

The Oil Pollution Act of 1990 consolidated a patchwork of federal laws dealing with oil spills. Prior to the act, oil pollution was mainly controlled under the Clean Water Act and various other federal laws aimed at oil pollution in certain areas or from certain activities.[519] Congress recognized the desirability of streamlining these laws, however, throughout the 1970s and 1980s, there was no pressing need to do so. Then, on March 24, 1989, the tanker Exxon Valdez spilled approximately eleven million gallons of oil into Prince William Sound off the shore of Alaska. Congress quickly responded with the Oil Pollution Act of 1990.

The liability framework established for oil spills under the Oil Pollution Act is very similar to that established by the Comprehensive Environmental Restoration, Compensation and Liability Act.[520] Under the Oil Pollution Act, responsible parties are strictly liable for removal costs and specified damages.[521] In the event response costs and damages cannot be obtained from responsible parties, a trust fund is available to pay those costs.[522] The only available defenses to liability are the same as under CERCLA – where the discharge of oil is caused solely by an act of God, an act of war, or an act or omission of a third party under certain circumstances.[523]

Also like CERCLA, the Oil Pollution Act authorizes private causes of action against responsible parties for uncompensated removal costs. However, the Oil Pollution Act goes beyond CERCLA in providing – for the first time in a federal "environmental"

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uncompensated, and substantial barriers to victim recoveries – such as legal defenses, statutes of limitation, the corporate form, and the burdens of proof that favor those responsible for the spill. S. REP. NO. 94 at 2 (1989), *reprinted in* 1990 U.S.C.C.A.N. 722, 723.

[519] *See, e.g.*, Deepwater Port Act of 1974, Pub. L. 93-627, 88 Stat. 2126.

[520] 42 U.S.C. §§ 9601-9675 (1994 & Supp. I 1995).

[521] 33 U.S.C. § 2702(a); United States v. Conoco, Inc., 916 F. Supp. 581 (E.D. La. 1996).

[522] 33 U.S.C. § 2712.

[523] 33 U.S.C. § 2703(a)

statute – a private cause of action for those who are injured by pollution.[524] However, the act does not go so far as to establish a cause of action for personal injury. Recovery is limited to "economic" damages only. The act authorizes recovery for damage to real or personal property by a person who owns that property,[525] loss of subsistence use of natural resources by anyone who uses the resource,[526] and loss of profits or earning capacity resulting from damage to real or personal property, or a natural resource.[527]

Not only does the Oil Pollution Act provide a private cause of action, it also sets up a compensation scheme to ensure that persons injured by an oil spill receive compensation for their injuries. Claims against a federal fund may be made if injured parties can't recover from responsible parties. Under the law, when an oil spill occurs, the President must designate the source of the spill and notify the responsible party of that designation.[528] If the responsible party does not deny the designation, the responsible party must advertise the designation and the procedures by which injured persons may present claims.[529] If designation as a responsible party is denied or no designation can be made, injured persons may present claims to the Oil Spill Liability Trust Fund.[530] The

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[524] However, prior to filing suit, an injured party must file all claims for removal costs or damages with the responsible party. 33 U.S.C. § 2713(a). The injured party may then file suit if unable to reach a settlement with the defendant. 33 U.S.C. § 2713(c). Filing a claim with the responsible party is a statutory prerequisite to filing suit against them. *See* Boca Ciega Hotel, Inc., v. Bouchard Transp. Co., Inc., 51 F.3d 235 (11th Cir. 1995) (court dismissed, without prejudice, plaintiff's claims that defendant's oil spill had caused them economic damage because plaintiffs had not first filed claims with defendant).

[525] 33 U.S.C. § 2702(b)(2)(B).

[526] 33 U.S.C. § 2702(b)(2)(C).

[527] 33 U.S.C. § 2702(b)(2)(E).

[528] 33 U.S.C. § 2714(a).

[529] 33 U.S.C. § 2714(b). *See* 33 C.F.R. § 136.313 for the required content of the responsible party's advertisement.

[530] 33 U.S.C. § 2714(c). The Oil Spill Liability Trust Fund is established by 26 U.S.C. § 9509. One of the sources of the trust's funds is a tax on oil transported in U.S. waters.

fund then has a right of subrogation against responsible parties for any payments made to claimants.[531]

Like other federal compensation schemes, the Oil Pollution Act of 1990 provides potential defendants with a limit on their liability.[532] In general, liability is limited for each incident to $10 million for tank vessels (with smaller limits for smaller vessels), $75 million for offshore facilities that are not deepwater ports, and $350 million for offshore facilities that are deepwater ports.[533] However, these limits are not available if the incident was caused by gross negligence or willful misconduct, or the responsible party fails to report the incident and cooperate with government officials in removal activities.[534]

Furthermore, these liability limits may not be all that they seem when one considers that the act specifically reserves to the states the right to enact their own spill compensation laws.[535] Here lies the major shortcoming of the Oil Pollution Act, as it relates to its ultimate success as an alternative compensation scheme. Since a state is under no obligation to limit the liability of shippers, and may enact an unlimited liability law, there is no uniformity or certainty to a defendant's potential liability. Without this,

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[531] 33 U.S.C. § 2715.
[532] 33 U.S.C. § 2704.
[533] 33 U.S.C. § 2704(a).
[534] 33 U.S.C. § 2704(c).
[535] 33 U.S.C. 2718. The Senate Report states:

> The theory behind the Committee action is that the Federal statute is designed to provide basic protection for the environment and victims damaged by spills of oil. Any State wishing to impose a greater degree of protection for its own resources and citizens is entitled to do so. On the other hand, a State might feel adequately protected by the Federal statute and therefore choose not to enact additional State law. In any event, the Committee chose not to impose, arbitrarily, the constraints of the Federal regime on the States while at the same time preempting their rights to their own laws.

S. REP. NO. 94, 101st Cong., 2d Sess. 6 (1989), *reprinted in* 1990 U.S.C.C.A.N. 722, 728.

the foundation of the Oil Pollution Act's alternative compensation scheme remains flawed.[536]

Many states have enacted unlimited liability laws for oil spills.[537] As a result, many reputable oil shippers have refused to do business in those states, since they are unwilling to operate under the specter of unlimited liability.[538] Arguably, those who fill the gap and operate under such conditions – so called "rust bucket" tankers – are even less financially able to pay for a major oil spill.[539] Until state laws imposing unlimited liability are preempted by federal law, the success of the Oil Pollution Act's compensation scheme is in question.[540]

## Conclusion

Nearly thirty years ago, the United States government initiated a massive effort to protect and clean up the natural environment. The reason was simple. A clean environment was considered good – a necessity for human health and well being. An environment fouled by toxic substances was considered bad. We knew, intuitively, that exposure to toxic substances caused injury, disease and death.

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[536] *See* Benjamen Grumbles & Joan Manley, *The Oil Pollution Act of 1990: Legislation in the Wake of a Crises*, 10 NAT. RESOURCES & ENV'T J. 35, 42 (1990) (noting the lack of preemption of state unlimited liability laws is a "wildcard" that may determine whether the Oil Pollution Act of 1990 is a success or a failure).

[537] Jeffrey Morgan, *The Oil Pollution Act of 1990: A Look at its Impact on the Oil Industry*, 6 FORDHAM ENVTL. L.J. 1, 6 at n.35 (1994) (by August 1991, 36 states had unlimited liability laws applicable to petroleum carriers).

[538] *Id.* at 7 (describing short-term impacts of the Oil Pollution Act of 1990 on the petroleum industry).

[539] *Id.*

[540] Grumbles & Manley, *supra* note 536.

While the federal government has enacted laws that regulate, in agonizing detail, toxic substances from the time they are created until the time they are disposed of, no federal environmental law, with the exception of the Oil Pollution Act of 1990, provides compensation for person injured by these substances. Those injured must resort to state common law causes of action as the means of compensation for their injuries.

Applying state common law in toxic tort actions produces lottery-like effects when it comes to compensating victims of toxic exposure. Endless permutations arise when the common law of torts is interpreted by the courts of fifty different states. Persons exposed to toxic substances must ask the following questions: Is there a legal theory of recovery for my injury? Will the law recognize my injury as valid? Does federal law preempt my claim? Has the statute of limitations run? Is there a defendant I can sue? Has my claim been subsumed in a class action? If the government caused my injury has it waived sovereign immunity?

In many respects the common law has adapted to meet the challenges posed by toxic torts. Discovery rules in statutes of limitations are one example. Unfortunately, this adaptation, like all others, came only after the common law extinguished a large number of otherwise valid claims. That the common law has adapted for the benefit of future claimants is of little consolation to someone who has not been compensated because his case was dismissed.

The law has responded to the inadequacies of common law tort recovery in other circumstances by establishing compensation schemes. Such schemes, while not without problems, further the interests of both plaintiffs and defendants, and represent a logical compromise between their competing interests. Although sorely needed by toxic tort

victims, such schemes will probably not be forthcoming until science establishes a clearer connection between exposure to toxic substances and disease. Currently, there is enough of a gap in our knowledge of disease etiology that industries involved with toxic substances do not face the specter of unlimited liability. Once the possibility of unlimited liability exists, industry will seek some means to manage that liability. A compensation scheme can provide the means.

The Oil Pollution Act of 1990 establishes a victim compensation scheme within the framework of a regulatory environmental law. In establishing this scheme, the federal government set aside its custom of leaving the compensation of persons injured by toxic exposure to state common law tort actions. Now that the federal government has acted in this area, other similar laws may follow.